

DAILY METAL REPORTER

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In This Issue

EXCESSIVE IMPORTS THREATEN U. S. BRASS MILL INDUSTRY

By JAMES M. KENNEDY, Chairman
Revere Copper and Brass Incorporated

TARIFF AID REQUIRED FOR LEAD AND ZINC INDUSTRY

By CLARK L. WILSON, Chairman
Emergency Lead-Zinc Committee

BRITISH METAL MARKETS

By L. H. TARRING
London, England

DOMESTIC METAL MARKET REVIEW

WASHINGTON REPORT

METAL STATISTICS

**OCTOBER
1960**

ZINC GALVANIZING

**Protects
Vital Body
Parts In
FORD
MOTOR CO's
Compact
Cars**



Cutaway phantom view shows where zinc galvanized steel is used in Ford Falcon. Lighter portions illustrate the rocker panels, floor side members, front rail extensions, rear rails and rear torque box — all made from continuous hot dip galvanized steel.

COMPARATIVE TESTS PROVE GALVANIZED STEEL BEST CORROSION GUARD FOR VULNERABLE PARTS IN UNITIZED CONSTRUCTION

After 2½ years of evaluation tests, FORD MOTOR COMPANY'S Advanced Body Development decided galvanized steel was the best material for protecting unitized bodies against corrosion.

The box type construction of unitized bodies makes corrosion a critical problem because moisture and road salts become trapped in vital underbody parts. Zinc galvanized steel

is expected to give these parts 2½ to 3 times longer life than conventional low carbon steel. This would mean that they will be corrosion-free for 10 to 12 years under normal use.

This is the reason why Ford and other auto makers are now using galvanized steel for the basic framing members of the new unitized bodies.

ANOTHER EXAMPLE OF THE VERSATILITY OF CONTINUOUS GALVANIZED STEEL

The use shown here is one of a wide variety of applications where continuous galvanized sheet provides the successful combination of protection plus formability. This pre-protected metal can withstand torturous deformation without losing its corrosion-resis-

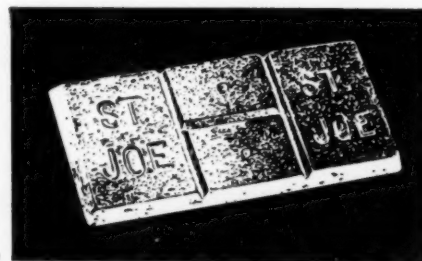
tance. The zinc coat flows with the base metal — does not chip, flake, powder or peel under severe forming operations.

St. Joseph Lead Co. supplies zinc "electronically-matched" to virtually any specifications which operators of continuous galvanizing lines may require.

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ST. JOE

250 Park Avenue, New York 17, N. Y.



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Two LINE Editorials

An aviation expert says that within fifty years the helicopter will have displaced the automobile for family use. Then your casual visitors can really drop in on you.

* * *

A pessimist prognosticates that, if inflation continues, "our money will be practically worthless" by 1970. Well, we needn't starve; we can still use our credit cards.

* * *

A straw vote, as everybody knows, is an entirely unreliable indicator of the outcome of an election — unless, of course, it shows that your man is ahead.

* * *

A prominent geologist warns that water is becoming scarcer every year and should not be wasted. Maybe we had better turn off Niagara Falls.

* * *

New York style experts are trying to induce the ladies to wear colored wigs, at \$175 per wig — as though our overhead expenses weren't already high enough.

* * *

According to one political authority, Mr. Kennedy is more conservative than he seems to be and Mr. Nixon is more liberal than he appears. It might help some confused voters to make up their minds if both candidates would try harder to appear to be what they are.

BUSINESS IN MOTION

To our Colleagues in American Business ...

The extruded copper section sketched below is used in a low-voltage circuit breaker made by one of the country's leading electrical equipment manufacturers.

Originally it was two extrusions brazed together as shown by dotted line. However, it was reasoned, if it could be made as a single extrusion a number of operations would be saved. At first that procedure appeared to be impractical in a copper extrusion as intricate and heavy as this (piece of it only $3\frac{7}{16}$ " long, measuring $4\frac{1}{4}$ " x $4\frac{7}{8}$ ", weighs eight pounds, seven ounces). But the possibility was believed to be worth investigating.

Through close collaboration between the manufacturer's engineering department and the Revere Methods and Production Departments, it was found possible to combine these two sections into a single extrusion. Work was started, dies were made and test runs conducted. The tooling (for hot extrusion was followed by cold drawing) also posed some special problems. It had to be both rugged and precise in order to produce this monster extrusion to the

manufacturer's exacting specification requirements.

Finally, a sample extrusion was delivered to the customer for testing and found to be right in every way.

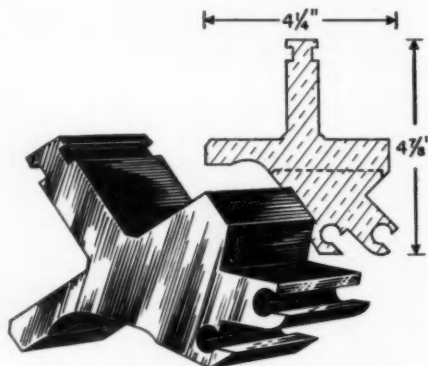
Not only does this Revere Copper Extrusion eliminate much costly machining in the customer's plant, but it obviates the need to purchase separate extrusions and braze them together. An extra benefit was

gained in the form of longer life for the new extrusion, because the heat required to join the two pieces used originally had tended to soften the built-up unit and thus shortened its useful life.

So, while some problems may seem virtually insoluble at first, why not explore the

possibilities by doing as this leading manufacturer did . . . call on the Revere Technical Advisory Service? In that way, by "fitting the metal to the job," Revere may be able to help you to cut costs, produce a superior product, or both.

In fact, it generally pays to adopt that principle with all suppliers—take them into your confidence; thus add their abilities and experience to your own.



REVERE COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

Executive Offices: 230 Park Avenue, New York 17, N. Y.
Distributors Everywhere

Washington Report



October 18, 1960

THE ADJOURNMENT of Congress has reduced to a trickle the torrent of metal news which had been gushing forth. This month, the major item of interest was a report on lead and zinc by the United States Tariff Commission to the President. This was the first periodic survey on the development in the trade in unmanufactured lead and zinc since the "escape clause" action, on October 1, 1958, which resulted in the imposition of import quotas on unmanufactured lead and zinc. This report was made pursuant to paragraph 1 of executive order 10401 of October 14, 1952, which order prescribed procedure for periodic review of escape clause actions.

Such review is limited to the determination of whether a concession that has been modified or withdrawn can be restored in whole or in part without causing or threatening serious injury to the domestic industries concerned.

In submitting its report to the President under paragraph 1 order 10401 with respect to unmanufactured lead and zinc, the commission advised the President that the conditions of competition between imported and domestic unmanufactured lead and zinc had not so changed as to warrant the institution of a formal investigation under the provision of paragraph 2 of executive order 10401.

This means that, in the commission's view, the developments in the trade in unmanufactured lead and zinc do not warrant a formal inquiry into the question of whether the existing restrictions on the imports of unmanufactured lead and zinc could be relaxed without resulting in serious injury to the domestic industry concerned.

Reaction of Industry

The Tariff Commission's report to the President confirms the lead and zinc industry's contention that domestic producers are being hurt by the importation of foreign metal. Had the commission found conditions otherwise, it could have recommended an easing of the restrictions that are now in existence.

In lead and zinc producing circles the feeling was quite general that the

commission's findings may prove helpful when the industry renews its efforts next year to have quotas dropped and in their place to have the import duties boosted.

Statement by Overton

Also of interest to the metal industry was a statement by J. Allen Overton, Jr., vice chairman, U. S. Tariff Commission, before the American Mining Congress in Las Vegas, that per capita primary metal consumption in the Common Market countries has been narrowing the gap with the United States.

"Using the four principal nonferrous metals for illustration, the trends are striking," Mr. Overton said. "With zinc, for example, average annual per capita consumption in the Common Market area during 1947-49 was 39 per cent as high as ours; during the intervening years it increased steadily, and in 1959, Common Market per capita consumption was 78 per cent of ours. Making the same comparison with lead, Common Market per capita consumption increased from 33 per cent of our level, to 88 per cent, an even larger gain over the same period. For copper, the gain was from 33 per cent of our per capita consumption, to 77 per cent. For aluminum, the increase was from 20 per cent to 30 per cent."

Mr. Overton continued:

"These figures are for consumption of primary metal only. I am aware that using total consumption, including scrap, might change the picture slightly, and I am also aware that part of this trend is due to the substitution of other substances in certain uses of the metals. Even so, the figures make it evident that the Common Market is already reaching

out for the high-living-standard, high-metal-consuming way of life we have been used to in this country. The full implementation of the European Common Market is sure to accelerate that trend.

"Two inferences suggest themselves. One, what we have already experienced, is an intensification of the competition in manufactured goods by Common Market producers. Heretofore, we have tended to luxuriate in the feeling that other countries could never hope to compete with our mass production techniques in the manufacture of heavy industrial goods. We would be wise to get rid of that delusion promptly.

"The other inference is more optimistic. As the Common Market and other areas of the world move on to this high-mineral-using plateau, world markets for some of these products may, we hope, be broadened and strengthened. During recent years our own metals have suffered from the competition of worldwide surpluses. Just possibly, these world surpluses may begin to disappear, thus raising the general level of world, as well as American, prices."

GSA to Sell Chromite Ore

Stockpiling again was in the news last month. The General Services Administration announced plans for disposal from the national stockpile of approximately 89,750 long tons of low grade domestic chromite ore and 151,000 pounds of ferro-alloys. The GSA said the materials are now in excess to stockpile needs since a defense requirement for them no longer exists.

Their sale, through competitive bidding, will take place after the expiration of six months. A waiting period of this duration is required by law. GSA plans to conduct the disposal of the chromite ore in two stages with not less than six months separating the two sales. All of the ferroalloys and about half of the chromite ore will be offered first.

The GSA also will sell 169,000 pounds of cobaltferrous materials from the national stockpile.

Other Items Offered

GSA also reported it is selling, on a sealed bid basis, approximately 8,300 short tons of baddeleyite, 6,200 short tons of zircon concentrates and 1,700 short tons of zirconium-bearing material which are excess to defense requirements. GSA recently sold 850 tons of zircon concentrates which are not included in the 6,200 tons now available for disposal.

The baddeleyite is stored at Jeffersonville, Indiana, and Columbus,

(Continued on Page 9)

Excessive Imports Threaten

Status of U. S. Brass Mill Industry

By JAMES M. KENNEDY, Chairman, Revere Copper and Brass Incorporated

I AM HERE to testify in opposition to further tariff concessions on the brass mill products listed for consideration at the forthcoming GATT meetings, as more fully set forth in my statement of June 27, 1960 to the Tariff Commission and the Committee for Reciprocity Information.

In that statement I pointed out that, historically, the United States has been a net exporter of brass mill products. In 1936 we exported 39,600,000 pounds and imported 600,000 pounds for a net export position of 39,000,000 pounds. In 1947 we exported 58,600,000 pounds and imported 900,000 pounds for a net export position of 57,700,000 pounds. In succeeding years our export position declined until in 1951, for the first time, we became net importers to the

The accompanying article is the text of a statement presented by Mr. Kennedy at hearings of the United States Tariff Commission and the Committee for Reciprocity Information, in Washington, D. C., on September 7, 1960.

extent of 13,000,000 pounds. Since 1951 imports have climbed steadily to a record 199,000,000 pounds in 1959 against exports of only 16,000,000 pounds for a net import position of 183,000,000 pounds, which, in terms of the 1947 balance, means an annual loss of over 240,000,000 pounds to our industry.

Not Growth Industry

My statement also pointed out that ours is not a growth industry. As evidence of this lack of growth, I have attached to this statement Ex-



JAMES M. KENNEDY

hibits 1 and 2, which give a comparison of brass mill industry shipments

EXHIBIT 1 Primary Brass Mill Shipments and Imports Copper Products (M Pounds)

Year	—Sheet and Strip—		—Rod—		—Tube For Plumbing—		—Other Than Plbg.—		—Total—	
	Domestic	Imports*	Domestic	Imports	Domestic	Imports†	Domestic	Imports	Domestic	Imports‡
1930	183,041	25	33,901	...	7,477	25	51,830	...	276,839	50
1931	138,801	20	19,611	...	7,013	...	44,448	...	210,002	20
1932	91,095	16	9,814	...	8,203	1	22,334	...	131,787	17
1933	135,311	2	13,742	...	13,913	1	38,250	...	201,269	3
1934	143,040	1	17,523	...	15,789	...	44,011	...	220,589	1
1935	177,880	3	21,372	...	22,266	2	51,864	...	275,840	5
1936	230,515	10	33,835	...	38,244	2	77,151	...	382,865	12
1937	220,658	2	39,417	...	35,940	...	83,151	...	382,376	2
1938	134,576	2	16,050	...	37,316	4	49,273	...	239,498	6
1939	208,262	5	29,737	...	56,263	...	73,191	...	371,316	5
1940	212,876	...	43,118	...	63,246	...	81,400	...	405,178	...
1941	342,205	37	90,959	...	83,583	1	131,120	...	655,557	38
1942	136,867	...	97,665	...	21,137	2	103,679	...	364,039	2
1943	127,422	14	76,635	...	11,973	60	113,838	...	336,395	74
1944	143,566	69	63,259	...	14,416	1,801	115,349	...	342,727	1,870
1945	201,025	26	59,667	...	38,228	...	112,015	...	418,603	26
1946	286,774	1,163	60,628	...	96,856	2	135,039	...	583,611	1,165
1947	336,880	631	71,424	...	150,456	8	174,721	...	739,020	639
1948	321,778	128	60,574	...	204,167	6	165,848	...	757,681	134
1949	250,529	20,620	46,888	...	148,933	20	118,384	...	568,230	20,640
1950	335,112	17,975	67,025	...	251,927	350	197,443	...	857,454	18,329
1951	271,532	14,025	82,920	...	159,598	949	183,198	...	702,150	14,974
1952	245,154	17,035	83,150	...	164,820	5,146	159,086	...	657,051	22,181
1953	243,564	11,176	63,701	...	156,625	1,165	191,038	...	660,580	12,341
1954	215,048	12,656	54,283	...	210,481	5,266	176,025	...	660,587	17,922
1955	272,588	18,288	72,467	4,679	262,148	11,592	205,210	...	818,877	34,559
1956	222,594	16,582	87,642	1,611	209,737	23,293	208,367	...	737,355	41,486
1957	190,307	22,337	67,294	133	210,127	31,396	170,698	...	643,941	53,866
1958	146,101	37,924	50,652	281	248,712	46,430	167,689	...	618,237	84,635
1959	183,009	42,622	63,435	10,363	285,579	51,724	202,694	...	742,056	104,709
1960§	170,976	31,528	57,512	18,166	219,392	46,626	201,065	...	655,247	96,320

* Also includes rod, no separate breakdown in this category until 1955.

† Copper Tube Other Than Plumbing imports included with Copper Tubes For Plumbing. No separate breakdown available.

‡ The combined total of the categories listed above differs from the total shown for all copper products to the extent of copper wire shipments, which are too small to be influential as a factor in the brass mill industry.

§ Projected on an annual basis from first six months.

Sources: Domestic Shipments — as reported by The American Bureau of Metal Statistics.
Imports — as reported by the U. S. Department of Commerce, Bureau of the Census.

and foreign imports from 1930 to date in product categories.

As another example, in 1959 brass mill shipments showed a 47 per cent decrease from the 1943 base of 1,804,000 short tons while, on the same basis, competitive metals such as steel increased 5 per cent and aluminum 112 per cent. In 1960 brass mill shipments will be down an estimated 55 per cent from the 1943 level to 812,000 short tons. Obviously, we cannot afford the loss we have already suffered and have no wish to contemplate the damage of further tariff concessions.

The general concept of foreign trade was to export from the United States to foreign countries products not produced by them. Imports to this country were on a similar basis. Today we permit and encourage the importation of products for which we have domestic capacity double the yearly domestic market in the foreseeable future.

Labor rates in England, Western Europe and Japan are one-eighth to one-third of ours. This, added to their comparably lower rates of factory overhead, salaried personnel and selling and administrative expense, based on their respective standards of living, accounts, in my opinion, for a 25 per cent differential in manufacturing costs, and this would seem to be borne out by their price schedules.

Decline in Margins

For example, fabricating spread is the difference between the price of

raw copper on a given day and the selling price of the finished product. This spread is the margin we have for manufacturing and profit. As an indication of our decline in margins, I offer the following comparison on some of the large volume brass mill items:

	12/1/58 Spread Per Lb.	Current Spread Per Lb.	Decrease in Spread Per Lb.
Sheet copper— standard sizes	27.33c	15.00c	12.33c
Radiator copper (.0035" gauge) ...	22.56c	19.75c	2.81c
Radiator copper— automotive (.0025" gauge)	30.92c	24.50c	6.42c
Brass plumbers' tube	28.65c	22.74c	5.91c
Copper water tube, Type L, 1/2"	24.33c	19.52c	4.81c

Even with these reductions, domestic prices are not presently competitive and, in the case of copper water tube, the largest import item, the foreign price quoted in this country today is as much as 4.5c per pound under our selling prices.

Foreign raw material costs are about the same as ours. The producers' price for raw copper is 33c a pound in the United States. It is slightly under 30c on the London Metal Exchange. The 1.7c per pound duty on raw copper imported into this country, added to ocean freight and other shipping costs, today imposes no disadvantage on the foreign manufacturer; in fact, with these charges included, his cost for copper landed in the United States is lower than the U. S. producers' price to domestic brass mill fabricators. Figures compiled by The American Bureau of Metal Statistics indicate that

in peacetime years the LME price is usually under the domestic copper price and to such an extent as to reduce thereby the effectiveness of the 1.7c tariff on primary copper.

Foreign man-hour production efficiency is a match for ours; their quality standards are the same. The old theory that the United States can outproduce, per man hour, any country in the world is, in respect to the brass mill industry, obsolete. After the war innumerable foreign technical teams visited this country and our mills at the invitation of the U. S. Government. They obtained the information they needed to rehabilitate their industries and, with funds supplied by the Marshall Plan and foreign aid, installed the latest and best equipment.

Foreign Aid Boomerangs

Little did we realize that this would boomerang and that part of their output would be channeled into this country at prices so low the domestic price level would be consistently forced down in a continuing effort to approximate — since we could not profitably meet — the foreign selling price.

Imports have hurt in three ways:

1. The domestic industry has lost approximately 200,000,000 pounds of brass mill shipments.
2. Its profits have been seriously impaired by lower prices necessitated by low-priced foreign competition.
3. American labor has lost 2,857

EXHIBIT 2 Primary Brass Mill Shipments and Imports Copper Alloy Products (Including Phosphor Bronze and Nickel Silver) (M Pounds)

Year	Sheet, Strip & Coil		Rod		Wire		Pipe & Tube For Plumbing		Pipe & Tube Other Than Plumbing		Total	
	Domestic	Imports*	Domestic	Imports	Domestic	Imports	Domestic	Imports	Domestic	Imports†	Domestic	Imports
1930	299,901	15	192,348	...	28,826	164	45,839	...	72,159	304	639,073	483
1931	245,335	8	155,202	...	23,765	120	43,232	...	55,798	791	523,332	919
1932	168,223	9	86,796	...	30,678	174	41,578	...	25,725	841	353,001	1,024
1933	258,938	89	152,067	...	49,535	265	44,427	...	35,760	405	540,726	759
1934	283,969	3	161,992	...	40,855	242	36,576	...	36,868	487	560,262	732
1935	331,693	5	203,994	...	56,387	178	47,719	...	50,610	533	690,403	716
1936	410,529	1	278,830	...	70,155	233	55,521	...	63,984	406	879,019	640
1937	411,486	9	298,500	...	66,607	258	52,743	...	72,572	240	901,907	507
1938	241,999	10	163,910	...	40,714	107	46,903	...	47,454	601	540,979	718
1939	390,152	4	281,992	...	70,164	44	59,984	...	67,183	650	869,474	698
1940	586,059	5	383,813	...	81,404	...	57,033	...	89,012	39	1,197,322	44
1941	957,497	38	687,779	...	108,674	...	59,014	...	146,690	346	1,938,655	384
1942	1,713,370	1,093	806,656	...	62,103	465	21,862	...	211,501	24	2,815,493	1,582
1943	2,075,238	16,028	839,462	...	76,353	31	18,157	...	262,594	13	3,271,805	16,071
1944	1,597,297	21,950	919,907	...	72,385	3	16,261	...	280,573	715	2,886,424	22,668
1945	1,086,976	12,035	811,698	...	92,506	4	30,010	...	204,342	...	2,225,531	12,039
1946	617,172	426	675,751	...	116,124	65	57,272	...	103,467	8	1,569,785	494
1947	594,363	307	488,777	...	107,369	...	42,503	...	127,334	11	1,360,437	318
1948	589,800	256	517,502	...	106,708	...	43,873	...	136,367	137	1,394,250	393
1949	434,880	115	342,716	...	69,012	20	31,032	...	96,302	310	973,944	445
1950	664,736	10,214	642,935	...	113,483	491	41,625	...	125,345	1,629	1,588,125	12,334
1951	620,555	11,697	655,623	...	103,946	395	33,842	...	129,260	1,883	1,543,224	13,975
1952	702,834	32,690	698,781	...	96,224	367	33,512	...	152,771	881	1,684,122	33,938
1953	843,618	26,170	623,167	...	95,026	326	27,413	...	174,431	7,277	1,763,659	33,773
1954	538,450	5,192	443,853	12,219	78,195	505	27,160	...	114,922	15,156	1,202,579	32,982
1955	614,223	6,236	588,811	11,645	104,924	383	26,494	...	135,198	20,706	1,469,590	38,970
1956	525,718	7,295	488,905	15,111	88,006	804	23,513	...	134,366	23,913	1,260,511	47,123
1957	471,053	6,770	390,816	16,819	78,349	2,895	18,449	...	123,274	28,431	1,081,940	54,915
1958	401,030	13,708	329,167	19,119	72,998	2,992	21,289	...	95,360	33,494	919,842	69,313
1959	511,929	26,119	433,059	24,128	96,741	5,987	22,703	...	98,873	38,426	1,163,306	94,660
1960†	435,562	27,080	364,489	26,386	74,900	6,124	19,208	...	91,710	31,210	985,869	90,800

* Also includes rod, no separate breakdown in this category until 1954.

† Pipe and Tube For Plumbing included with Pipe and Tube Other Than Plumbing. No separate breakdown available.

‡ Projected on an annual basis from first six months.

Source: Domestic Shipments — as reported by The American Bureau of Metal Statistics.

Imports — as reported by The U. S. Department of Commerce, Bureau of the Census.

Kennecott Copper Corporation Kennecott Sales Corporation

Producers and Sellers of
Electrolytic Copper
Chino Fire Refined Copper (K.C.M.)
Braden Fire Refined Copper (★★★)
Molybdenite

Offices

161 East 42nd St., New York 17, N. Y.

PHELPS DODGE CORPORATION

PHELPS DODGE REFINING CORPORATION

300 PARK AVENUE, NEW YORK 22, N. Y.

C O P P E R

P★D—ELECTROLYTIC—LNS

PDM FIRE REFINED

COPPER SULPHATE — NICKEL SULPHATE
SELENIUM — TELLURIUM — PRECIOUS METALS

Buyers of

BULLION, ORES, CONCENTRATES, MATTE and BLISTER

jobs in the brass mill industry. (This is computed on the basis of 35 pounds per man hour and 2,000 hours per year for an annual production, per individual employee, of 70,000 pounds, divided into 200,000,000 pounds.)

Fabricators Abroad Expand

As the volume of imports into the U. S. increased, foreign fabricators expanded their facilities and unquestionably will enlarge them further. There is danger in leading them along this road to the point where they will have overexpanded and our Government will be forced to impose embargoes, quotas, higher tariffs and other protective measures for the survival of American industry. In the brass mill industry, I believe, that point has already been reached and the time for action is now.

For example, an American Metal Market news item of August 23, 1960, datelined Tokyo, indicates that Japan produced in June 21,333 tons of roll copper, a 416-ton increase over the previous month and the highest production since March when an all-time record was reached. We believe this is typical not only of Japan but of England and Western European countries. The purpose of the Marshall Plan was laudatory but its purpose has been served. In the face of these countries' expanded production and unprecedented growth, it is difficult to comprehend the need for further assistance and completely unrealistic to encourage their further expansion in the face of the domestic industry's steady decline.

On August 29, 1960, under the headline, "U. K. Brass Mill Exports Hit by New Zealand Venture," the American Metal Market reported that British fabricators expect a 4 per cent loss of their export market to result from the joint venture of Imperial Chemical Industries of Australia and New Zealand Ltd. and Yorkshire Imperial Metals Ltd. to erect a plant for producing copper and copper alloy sheet, strip and tube in New Zealand. The article states (in Italics) that both companies export brass mill products to the United States from their plants in the United Kingdom. I wonder if this is meant to imply that, as a result of the new facilities in New Zealand, they will try to fill the void in their English production by shipments to the United States. Imperial Chemical Industries are, of course, the "Du Pont" of the British Commonwealth, and it is hard to envisage the need to help a company of its wealth, research facilities and technical resources.

As another instance, in 1957 a company in western Canada issued a prospectus for bonds to finance erection of a copper tube mill that contained this statement: "Prospects for selling these products in the United States would appear favorable and the company's plans are based upon the sale of a substantial part of its production in the United States." Revere, like others in our industry, has ample facilities to supply the domestic market and we cannot help but wonder why we should have to shut down some of those facilities to assure the success of a new foreign enterprise. I cannot feel that the United States has any responsibility for a venture like this which entails no need for rehabilitation and no question of aid to an undeveloped country. No reason, in fact, exists but the result has been to cause great harm to our industry through their low-price competition.

U. S. Industry Sacrificed

The inescapable conclusion is that up to now the domestic brass mill industry has been sacrificed to the policy of free trade. This is a one-way street because we cannot compete in our own domestic market with foreign selling prices; consequently, we cannot hope to meet foreign prices in foreign countries and compete for foreign markets. This is evidenced by annual brass mill exports to all countries of less than 10,000,000 pounds a year. Thus, foreign nations have nothing to lose by inviting us to compete in their own markets. If the situation were reversed and U. S. labor rates were lower than foreign rates, I seriously doubt that we would be shipping to foreign countries any brass mill products except those which they lacked the facilities or capacity to produce. As a matter of fact, I believe all our exports — not brass mill products alone — fall into this category. I seriously doubt that any foreign production facilities have been curtailed to permit U. S. manufacturers to share their markets.

The position of the brass mill industry has been reversed. We gave aid and assistance to England, Western Europe and Japan and their brass mill industries are booming. Ours has suffered a serious decline.

... Embargo Study Proposed ...

I am therefore advancing for further study the thought that we should place temporary embargoes on all brass mill products entering this country; then give consideration to a quota system and to an increase in tariff rates sufficient to equalize the difference in labor and other perti-

nent costs. No economic justification existed, in fact, for tariff cuts previously made on brass mill products. The foreign fabricators' advantage in labor costs far exceeded the slight protection afforded by the original tariff list.

Our better way of life is made possible by higher wages and we have created the highest standard of living in the world. We all recognize the need to maintain this standard but it is essential that steps be taken now to safeguard American interests until other nations of the world catch up with our labor rates and standard of living. Some of our industries are in real trouble. The list is growing and will continue to grow unless action is taken. I have watched with alarm the deterioration of the brass mill and other industries, and I urge enlightened action of a realistic nature. It has become obvious that economic warfare through low prices by friendly countries can be just as harmful and effective as from any other source.

The brass mill fabricators have built a fine industry in the United States, essential to the peacetime economy and vital for defense in time of war. There are competitive problems within our industry and that is as it should be. We can deal with them because we meet on equal ground in terms of costs, labor rates and income taxes. We would welcome foreign competition on an equal basis.

Washington Report

(Continued from Page 5)

Ohio; the zircon concentrates at La Carne, Ohio; and the zirconium-bearing material at Coquille, Oregon.

Bids will be opened in Washington, D. C., on November 30, 1960, at 11 a.m. EST. The materials will be sold "as is, where is" f.o.b. carrier's conveyance except the zirconium-bearing materials which the purchaser will be required to outload.

Because the baddeleyite being offered contains more than 0.05 per cent contained uranium, the successful bidder or bidders must obtain a license from the Atomic Energy Commission before transfer of this material is made.

Stockpile Value Increases

Strategic and critical materials held in various U. S. Government stockpiles on July 31, 1960, totaled \$8,456,521,000. The value of the stockpiles, during July, increased by \$2,858,000.

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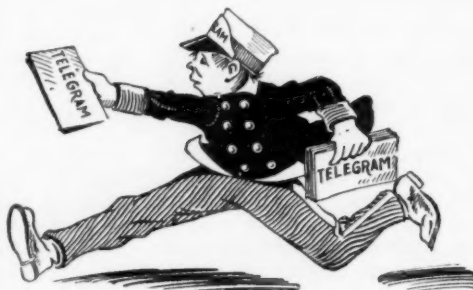
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Problems of Lead and Zinc Industry

By CLARK L. WILSON, Emergency Lead-Zinc Committee

I AM appearing here as Chairman of the Emergency Lead-Zinc Committee, an organization representing the domestic lead and zinc mining industry. Members of our Committee have carefully studied the "List of Articles Imported into the United States Proposed for Consideration in Trade Agreement Negotiations," currently being considered for recommendation by the Committee for Reciprocity Information and also being reviewed by the Tariff Commission under "peril point" proceedings.

We note that the list does not include "like or directly competitive articles" produced by our ELZ members in the unmanufactured lead and zinc industry, but there are many items included for consideration of possible concessions that use substantial quantities of lead and zinc.

I am sure we all recognize that for economic reasons the United States does not have an export market for unmanufactured lead and zinc products. Our domestic production and the substantial foreign imports of these two metals are used by the United States manufacturing industry. A surplus over the necessary supply from imports takes a portion of the domestic mining industry out of business. An increase of imported lead-zinc products, due to tariff concessions, will further affect the miner and also take business from the U. S. manufacturers. Any new source of imported lead and zinc regardless of its form will directly bypass present import restrictions on lead and zinc ores and metal and further weaken a domestic mining industry that has experienced and is still experiencing several years of severely depressed activity in mining, development, and exploration.

Tariff Investigation

The recent investigation No. 332-26 of the lead and zinc industry by the Tariff Commission established the present and potential circumvention of controls under present import quota restrictions of certain manufactured or semi-manufactured articles which are composed entirely of lead

or zinc, and in which the content of either of these metals is very high.

The decade of the 50's has been a period of continuing action by the domestic industry seeking a satisfactory solution to the problems of surplus lead and zinc created by excessive imports of ores and metal.

In February 1951, the industry had petitioned the Tariff Commission for an investigation under Section 336 of the Tariff Act for the purpose of comparing foreign and domestic costs of production. The Commission refused to undertake this study because lead and zinc had been listed for a possible concession in the approaching negotiations at Torquay. In spite of strong representations by industry concerning the probable effect of new tariff reductions, the new concessions were made at Torquay and went into effect on June 6, 1959. These are the rates effective today. Imports of lead and zinc more than doubled in 1952 compared to 1951, and market prices dropped. In July 1953, the House Committee on Ways and Means asked the Tariff Commission to make a full investigation of the lead-zinc industry and issue a report thereon. On September 14, 1953, the lead-zinc industry petitioned the Tariff Commission to make an investigation under Section 7 (the escape clause) of the Trade Agreements Act. The Tariff Commission made the two investigations concurrently and on April 19, 1954, sent a unanimous finding of serious injury to the President with recommendations for the maximum increase in duties. On August 20, 1954, the President formally declined to follow the recommendations of the Commission. Certain stockpile purchases, aimed at temporary assistance to the industry, were ordered and, subsequently, some barter transactions were arranged.

Developments in 1957

On May 28, 1957, all barter exchanges were ordered stopped, and on August 1, 1957, the Office of Defense Mobilization announced that stockpile goals were met. Metal prices went down. Stockpiling of lead and zinc was officially ended in April and June 1958. On June 19, 1957, the Administration, recognizing the serious plight

of the industry, sent to Congress a proposal for suspending existing duties on lead and zinc and substituting therefor a series of import taxes to be effective only when the price of lead was below 17 cents and the price of zinc below 14½ cents. Hearings were held on the Administration's Bill S 2376, in July and August, 1957. The industry concurred in the floor prices of 17 cents for lead and 14 cents for zinc, but could not accept a schedule of import taxes amounting to 25 per cent less than the Tariff Commission had recommended as the minimum needed. The Senate Finance Committee reported out the Bill on August 20, 1957, and it was placed on the Senate Calendar. Following an exchange of letters between the President and the Chairman of the Ways and Means Committee, which indicated inaction on the House side, the industry again petitioned the Tariff Commission for a new escape clause investigation. This petition was filed September 27 and hearings were held on November 19-26, 1957. In these hearings the industry suggested a combination of increased duties plus quotas, based on a Presidential letter of August 20, 1954, that the maximum increase in duties recommended by the Tariff Commission would have only a minor effect on lead-zinc prices and would not put miners back to work.

Findings in 1958

In April 1958 the Tariff Commission again unanimously found the domestic lead-zinc industry was being seriously injured and all six Commissioners recommended at least the reimposition of the 1930 rates, and three of the Commissioners recommended the maximum increase in duties plus the use of moderate quotas, 50 per cent of the 1953-1957 import experience. Immediately after the Tariff Commission decision the Secretary of the Interior proposed a "Domestic Minerals Stabilization Plan" with a target of stabilizing mine production of lead at no less than 350,000 tons of lead and 550,000 tons of zinc. The prices finally agreed upon were 15½ cents for lead and 13½ cents for zinc, plus some additional stabilization payments for the

Text of statement before Committee for Reciprocity Information in Washington, D. C., on August 30, 1960.

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smaller mines. Early in 1958, during consideration of the extension of the Trade Agreements Act, the Ways and Means Committee defeated an amendment which included a 4 cents tax on lead and zinc if increasing imports caused prices to drop below 17 cents for lead and 14½ cents for zinc. In the meantime, during June and July of 1958, the Senate Interior Committee held hearings on the Stabilization Plan Bill (S. 4036) introduced in the Senate by Senator Murray of Montana and other interested western Senators. This was favorably reported and passed the Senate on July 10, 1958, with only 12 votes mustered against it. On June 20, 1958, the President had announced that he was suspending consideration of the Tariff Commission's recommendations pending the outcome of the Congressional action on the proposed Minerals Stabilization Plan. The House Interior Committee held hearings on this Plan in late July 1958. The Committee reported it favorably, but it was rejected by the House on August 21, 1958, by a vote of 182 to 159.

Quota System Established

On September 22, 1958, the President announced the establishment of import quotas, effective October 1, 1958. The quotas have had some effects on the domestic lead-zinc situation but not enough to open mines and put men to work. In fact, 1959 employment figures are worse than 1958. Imports in 1959 were down 20 per cent, consumption up 10 per cent. These factors helped bring stocks down 14 per cent but left them still too large for strong market prices. Domestic lead production actually dropped to its lowest figure in 60 years and zinc showed only a token increase although strikes did aggravate this situation.

The current domestic price for lead is actually lower than the average 1958 price. Zinc has increased from 10c to 13c per pound since quotas became effective. These prices are not sufficient to maintain, much less encourage, new development of the domestic lead-zinc mining industry.

Lead-Zinc Stocks Increase

We had hoped for encouragement in increased domestic consumption this year that would reduce accumulated stocks and strengthen market prices. Actually, lead-zinc stocks have been increasing the past few months.

Domestic mine production may show a slight increase in 1960, although the present trend is not encouraging. This increase would be from large integrated mining and smelting operations and does not reflect any improvement in the position of independent mining organizations.

Another Tariff Study

During this quota period, the industry has had another comprehensive study by the Tariff Commission. Their report, issued in March 1960, recognized continuing serious injury to the domestic miner, and legislation pertaining to lead-zinc tariffs is again pending in Congress. The economic situation of the domestic industry is still critical as it operates under import controls provided by agreement procedures. Our Committee believes that it will require legislative action to correct these problems.

Items Using Lead and Zinc

My purpose in appearing today is to advise this Commission of those articles on the list for possible concessions which use unmanufactured lead and zinc in the production of the end product. It was pointed out in the recent letters from the respective chairmen and ranking minority members of the Senate and House Interior Committees to the President that concessions with respect to articles using unmanufactured lead and zinc in the production of the end product could mean greater competition from foreign sources, with a probable decline in the domestic production, and, in turn, probable lessening of outlets for unmanufactured lead and zinc. Also, since the lead and zinc industry has been in a depressed condition for some time, being under an escape clause action, the Government should be sensitive to any situation that may tend to lessen, in any way, the markets for these depressed metals.

White House Response

Our Committee notes with interest that the answers to these letters from the White House recognize the direct effect of trade in manufactures on producers of raw materials, and state that it is an important consideration in appraising the desirability of tariff changes on the finished items included in the public list of products that might be the tariff concessions.

Our committee appreciates the opportunity you have given us to emphasize this relationship.

Statistics are available indicating substantial tonnages of lead and zinc used annually in some products proposed for tariff concessions. These

are presented in the following tabulation:

Paragraph	Description	1959 Consumption of Pigments	
		Tons of Lead*	Tons of Zinc†
65	Paints	31,675	54,456
66	Pigments	.....	.....
70	Chrome Pigments	22,840	?
202-212-218	Ceramic Tile, Glassware, etc.	17,580	10,486
221 thru 231	Vitrified Ware	.....	.....
1020	Linoleum	.....	1,207
1301-1308	Rayon Articles	.....	28,187
1537	Rubber Tires	.....	79,506
		72,095	173,841

* Lead Industries Association.

† U. S. Bureau of Mines.

No doubt these totals of metal compounds used are conservative as it is difficult to obtain statistics on consumption for all the products listed for consideration of concessions. I believe it reasonable to assume that approximately 10 per cent of domestic lead-zinc consumption is used in these products.

This represents an important segment of U. S. markets for unmanufactured lead and zinc. I am sure you will appreciate that this cannot be invaded by imported products without further damage to the producers of the unmanufactured materials.

In summary, we trust you will keep in mind the present situation in the domestic lead-zinc mining industry and its efforts to establish a sound and stable economic basis as you consider proposals for further tariff concessions on manufactured products.

\$1,500,000 Mineral Survey Is Approved for Surinam

Washington — An agreement, providing for a \$1,500,000 detailed geophysical survey of the mineral resources of Surinam, was signed in Washington by representatives of the International Bank for Reconstruction and Development and the Government of Surinam. Surinam, on the northeastern coast of South America, is one of the constituent parts of the Kingdom of the Netherlands.

The project is one approved earlier by the United Nations Special Fund which has allocated \$770,000 to the cost of the survey to be carried out over the next two to three years. The remainder of the cost will be borne by the Government of Surinam. The purpose of the project is to provide information on the possible existence of commercial minerals in Surinam, such as iron ore, titanium, copper, nickel and cobalt and radioactive minerals. The World Bank is executing agent for the Special Fund in connection with the project.

BRITISH OBSERVERS EXPECT COPPER SUPPLIES WILL REMAIN PLENTIFUL DESPITE PRODUCTION CUTBACKS

New Nigerian, Bolivian Smelters Could Result in Halting U. K. Tin Exports; Lead Price Regarded as Cheap but Might Go Lower; Demand Off for Zinc Items

October 8, 1960

PRACTICALLY throughout September the copper market was in a state of waiting for something to happen. The Copper Institute's August figures, although not at all bullish did not show as big an increase in producers' stocks as some people had feared possible, but the knowledge that production was running rather in excess of consumption, and a failure of U. S. demand to pick up as much, or as rapidly, as had been hoped after the Labor Day holiday, led to basic sentiment rather bearish.

Prices on the London market held up very well on the whole in face of this, helped to some extent by a certain amount of buying on behalf of producers, but more perhaps by the fear that there would be a strike at Chuquicamata at the beginning of October, and that this might possibly prove to be a long drawn out affair.

At the same time, although it was

By L. H. TARRING
London, England

learned that production in the Congo was continuing at normal rates, few people felt that they could rely on this state of affairs continuing indefinitely, although the prospects were regarded as much brighter so long as U. N. Forces were there to keep order.

Towards the end of the month, however, with consumer demand in this country definitely on the quiet side, no worthwhile recovery in the United States rate of buying, and rather less Continental activity, prices sagged and then dropped rather sharply at the beginning of October when it appeared that although the Chuquicamata strike had broken out, it might not be very long lived, owing to the possibility of the Chilean Government ordering a return to work. This was coupled with what

seemed here a long over-due drop of 2 cents a pound on the U. S. custom smelter price. Although this was promptly followed by a statement that Rhodesian supplies were to be cut by 10 per cent, and an indication by Noranda that its production was likely to be down by some 10 per cent in the second half, compared with the first half of the year, the reaction on prices was very small.

It was noted that as far as the Anglo American group of companies in Rhodesia was concerned, the reduction in supplies might be achieved either by cutting production, or by withholding supplies from the market, and if the latter is adopted it is likely to have much less effect on sentiment than an outright cut in output. Moreover, whereas in normal times one might reasonably have expected the Union Miniere du Haut Katanga to join in the policy of output cutting to stabilize the market, the peculiar circumstances under which it is working in the Congo at the present time have made any such step problematical, and not to be

U. K. COPPER STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, U. K. production of refined copper during July showed a decline at 13,330 tons, compared with 19,075 tons the previous month. Stocks of refined copper were substantially higher at 77,918 tons (55,257 tons a month earlier) and blister also showed an increase at 20,165 tons against 15,134 tons in June. Of the refined stocks, consumers held 33,524 tons (29,725 tons). Consumption showed a sharp drop at 46,306 tons (65,398 tons). Details are given below.

	July 1960	January-July 1959	July 1960
Unalloyed Copper Products			
Wire*	14,358	124,690	159,616
Rods, bars and sections	1,276	11,137	12,049
Sheet, strip and plate	4,454	33,462	35,561
Tubes	5,556	37,757	41,760
Castings and misc.	650	4,550	4,550
Alloyed Copper Products			
Wire	1,460	10,049	12,260
Rods, bars and sections	10,982	77,101	95,001
Sheet, strip and plate	7,908	58,383	69,186
Tubes	2,099	12,629	13,684
Castings and misc.	6,234	42,365	50,211
Copper sulphate	2,097	24,432	18,676
Total all products	57,074	436,555	512,554
Copper content of output	46,306	353,676	420,926
Consumption of refined copper†	33,294	263,526	320,631
Consumption of copper and alloy scrap‡ (copper content)	13,012	90,150	100,295

* Consumption of H. C. copper and cadmium copper wire rods for wire and production of wire rods for export.

† Virgin and secondary refined copper.

‡ Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

U. K. ZINC STATISTICS

Stocks of zinc in the U. K. at the end of July, according to the British Bureau of Non-Ferrous Statistics, showed an increase over the previous month at 55,362 tons (52,004 tons), of which consumers held 21,468 tons (20,832 tons). Production fell to 5,910 tons from the previous month's figure of 6,109 tons. In common with the other main base metals, consumption was sharply lower (owing to holiday influences) at 25,594 tons, compared with 33,058 tons in June. Details are given below:

	July 1960	January-July 1959	July 1960
Brass	8,546	61,202	72,698
Galvanizing	6,856	55,441	57,459
of which:			
General	2,614	19,246	20,293
Sheet	1,749	14,265	14,039
Wire	1,270	11,503	12,808
Tubes	1,223	10,427	10,319
Rolled zinc	1,958	14,043	14,790
Zinc oxide	2,043	16,600	15,955
Zinc diecasting and forming alloy	4,497	31,064	38,976
Zinc dust	796	6,627	7,630
Miscellaneous uses	898	6,333	6,664
Total all trades	25,594	191,310	214,172
of which:			
Slab zinc			
High Purity (99.99%)	4,889	33,742	42,734
Electrolytic and high grade (99.95%)	4,586	35,997	40,298
G.O.B. Prime Western & debased	8,965	70,080	76,828
Other virgin material	110	1,414	1,458
Remelted zinc	492	3,317	3,998
Scrap — (zinc content)			
Zinc metal, alloys & residues	2,436	19,070	18,732
Brass and other copper alloys	4,116	27,690	30,124

U. K. TIN STATISTICS

Consumption of tin in the U. K., according to the British Bureau of Non-Ferrous Metal Statistics, showed a decline at 1,638 tons in July compared with 2,133 tons the previous month. Production in July also showed a decline at 1,894 tons of primary and 18 tons of secondary, against 2,828 tons of primary and 21 tons of secondary a month earlier. Stocks at the end of July showed an increase at 11,797 tons, of which consumers held 1,413 tons, against the June figures of 11,113 tons and 1,405 tons respectively. Details of consumption are given below:

	July 1960	January-July 1959	July 1960
Tinplate	751	5,874	6,746
Tinning:			
Copper wire	28	321	283
Steel wire	7	60	65
Other	64	456	470
Total	99	837	818
Solder	159	1,279	1,187
Alloys:			
Whitemetal	244	1,726	1,697
Bronze and gunmetal	176	1,175	1,443
Other	35	247	270
Total	455	3,148	3,410
Wrought Tin*			
Foil and sheets	22	189	162
Collapsible tubes	25	132	160
Pipes, wire and capsules	2	23	20
Total	49	344	342
Chemicals and other uses†	125	814	892
Total all trades	1,638	12,296	13,395

* Includes Compo and "B" metal.

† Mainly tin oxide and tin compounds.

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD		ZINC	
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1960										
January	259 5 3	246 8 9	259 12 0	791 7 6	787 11 0	791 14 0	74 15 8	74 10 6	94 11 5	91 14 11
February	263 17 5	245 17 6	264 6 0	792 7 5	790 3 10	792 15 3	73 17 3	73 15 6	88 17 2	88 18 5
March	253 5 4	237 14 10	253 11 4	787 11 0	786 15 0	787 17 10	76 5 4	75 7 4	90 3 2	88 17 12
April	262 2 1	244 15 0	262 8 5	790 11 4	785 5 0	790 18 11	77 10 6	76 11 5	92 8 7	89 15 11
May	248 4 8	243 0 3	248 9 7	785 1 4	784 0 0	785 7 9	77 8 3	76 16 6	92 1 11	91 9 1
June	250 15 0	244 2 6	250 19 3	793 5 0	789 3 4	793 11 5	73 7 6	74 0 8	90 11 11	90 3 10
July	254 11 7	246 19 5	254 16 11	812 10 3	808 9 9	812 16 8	71 4 10	72 0 7	90 4 8	89 15 11
August	244 5 2	243 14 7	245 5 11	801 12 3	803 10 3	802 0 11	70 19 0	71 7 1	87 8 7	87 9 2
September	234 14 1	235 5 3	234 16 7	804 18 8	802 15 8	805 7 3	69 18 11	70 4 11	87 2 9	86 8 11

counted on in the immediate future.

It seems pretty obvious that consumers generally, having been forewarned about the Chilean strike well in advance, have already covered themselves against such a possibility and to some extent this is also true as regards any uncertainty with regard to the maintenance of Congo output. These factors, coupled with definitely quieter conditions in several branches of the consuming trade, especially in this country, and to a lesser extent also on the Continent, new consumer buying has been conspicuously small.

There is a general feeling that copper will remain plentiful for the time being, and that something more than the 5,000 to 6,000 tons a month reduction in supplies involved in the Rhodesian and Noranda cuts will be necessary if further downward pressure on prices is to be avoided. Looked at from this side, the time would appear ripe — or even over-ripe — for some cutting back in U. S. domestic output, even though producers' stocks there have not so far been built up to any unduly large figure following their virtual exhaustion during the long strike last year.

New Nigerian Smelter

Whilst not of immediate market importance, perhaps the most inter-

esting thing in connection with tin during the past month, was the announcement that Consolidated Tin Smelters is to build a smelter in Nigeria to treat the locally produced ores on the spot. This decision was taken largely owing to the wish of the Nigerian Government for such a development, and partly owing to the possibility that Portuguese interests might step in. Consolidated Tin Smelters have, of course, treated practically all the production of Nigerian tin ore for a very long time. This is a further major change in the set-up of the tin industry of the world, which since 1939 has undergone more big variations than any of the other major base metals. Apart from the rise and fall of the U. S. smelter, stemming from wartime requirements, the diversion of Indonesian ores away from Holland has been of great significance to European consumers, and the U. K.'s tin smelter output (which has already suffered to some extent from the decline in Bolivian mine output) now has to look forward to a drop of say 10,000 tons a year through loss of Nigerian ore supplies.

On top of this there is recurrent talk of the possibility of a smelter being erected in Bolivia, the latest report being that Russia has offered assistance for such a project. It is obvious, therefore, that exports of English tin, which have been getting less, may in time cease altogether.

Spot Tin Squeeze

Meanwhile, as far as market movements are concerned the tone has been basically steady, but in the second half of September there was a temporary squeeze on the spot position in London due to the price here having earlier been below Eastern parity with the result that a fair amount of metal was bought here by the Continent. When it was shipped out spot supplies became very tight for a time.

It would not take very much for a stringency to reappear and this move might have the effect of keeping the London quotations much more closely aligned with Singapore than has always been the case in recent years.

So far there is little indication of any sudden flow of metal from Malayan stocks now that restriction has been removed, and provided American demand — which has been quiet recently — returns to normal levels, the tin situation appears to be basically very sound.

Lead-Zinc Study Group

The main event in lead during the past month or so has been, of course, the meeting of the International Lead and Zinc Study Group in Geneva. Whilst this reported that there had been some improvement in the statistical outlook since the January meeting, it nevertheless indicated a continuing surplus of production over consumption.

In consequence, as expected, the restrictions on supplies to the market were extended until March 31. But this had little favorable effect on market sentiment as the rising trend of producers' stocks, particularly outside the U. S. A., is regarded as a depressing feature.

As far as the market here is concerned, it is necessary always to look rather deeper than the Study Group's global figures, since it is the situation outside the United States, rather than that in the insulated domestic market that governs price levels here. The setback to the motor car trade has naturally had repercussions on the battery industry, and with other industrial pointers not particularly cheerful at the present time, lead quotations on the L. M. E. have sagged to the lowest level this year. Although at the current figures lead is generally regarded as cheap, there is no guarantee that the bottom has yet been reached.

On October 2, dealings on the London Metal Exchange began on the new contract under which prompts maturing on and after January 2, 1961, are for daily settlements, for metal in warehouse and on warrant. For the time being therefore, the current month quotation is on the old basis, whereas the forward figure relates to a three months price as in the case of copper and tin, and not

(Continued on Page 17)

U. K. LEAD STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports that U. K. stocks of lead during July showed an increase in imported refined at 46,329 tons (38,949 tons at the end of June), but English refined showed a decline at 6,740 tons (7,593 tons). Production of refined lead was 5,959 tons against 7,378 tons the previous month. Consumption was down rather sharply compared with June, namely 27,913 tons, against 33,318 tons. Details are as follows:

	July 1960	January-July 1959	January-July 1960
Cables	6,031	54,562	55,759
Batteries — as metal	2,744	16,811	23,434
Battery oxides	2,715	15,460	20,476
Tetraethyl lead	2,407	13,542	14,463
Other oxides and compounds	1,792	15,497	16,587
White lead	538	4,608	4,742
Shot (incl. bullet rod)	396	2,286	3,260
Tetraethyl lead	5,594	39,587	43,006
Foil and collapsible tubes	308	2,041	2,515
Other rolled and extruded	714	3,795	4,912
Solder	1,363	8,474	9,318
Alloys	1,751	10,504	12,086
Miscellaneous uses	1,650	7,846	9,332
Total consumption	27,913	195,013	219,890
of which:			
Imported virgin lead	13,714	100,984	109,766
English refined	6,789	41,896	53,293
Scrap including remelted	7,410	52,133	56,831

COPPER PRICE SAGS 3c LB. IN DOMESTIC MARKET; PRIMARY PRODUCERS, CUSTOM SMELTERS AT 30c

Lead, Zinc Steady; Spot Tin Higher on Tight Supply Situation; Aluminum, Silver, Quicksilver Unchanged; Cadmium Up 10c Lb.; Tungsten Powder Off

October 19, 1960

THE COPPER market demonstrated during the month in review that the law of supply and demand cannot be defied indefinitely. Prices of the red metal, which had teetered precariously for some time, finally toppled. On October 12 the major domestic primary producers cut their quotations by 3.00c a pound to 30.00c delivered. On October 14 custom smelters moved down 1.00c, also to the 30.00c level.

The lead and zinc markets were steady with prices holding at 12.00c a pound New York for lead and at 13.00c a pound East St. Louis for Prime Western zinc. Tin prices during the month rose on a tight spot supply situation. Aluminum was unchanged at 26.00c a pound. Quicksilver and silver were steady. Cadmium was increased 10.00c a pound. Standard tungsten powder prices were reduced approximately 5 per cent.

Copper Price Decline

The first leak in the copper price dike occurred on the first business day of the month, October 3, when custom smelters reduced their quotations by 2.00c a pound to 31.00c delivered (2.00c under the primary producer level). The reduction, initiated by American Smelting & Refining Co., did not come as a surprise, especially in view of the sharp drop in the London price to the equivalent of 28.125c. The spread of nearly 5.00c a pound between the markets made the domestic price situation untenable. Asarco, in announcing the reduction (which was quickly met by American Metal Climax and International Minerals & Metals Corp.), stated:

"An ample supply of copper seems to be in prospect to satisfy demand even in the face of current labor difficulties in Chile. We believe that the domestic price should be adjusted to a level which does not penalize the domestic fabricator of copper, who is forced to compete with imports of copper products fabricated abroad."

Kennecott Copper Corp. on October 12 reduced its price 3.00c a pound to 30.00c delivered. Phelps Dodge Corp. quickly met the reduction and Anaconda did a short time there-

after, both producers making their reductions also effective October 12. Brass and wire mills quickly reduced prices for their products (and their brass mill scrap buying prices) to reflect a copper market of 30.00c.

On October 13, the custom smelters knocked their price down another 1.00c to bring it in line with the producers' 30.00c level. Brass and bronze ingot prices were cut 0.25c to 1.50c a pound, depending on alloy. Beryllium copper products and scrap prices were correspondingly reduced. Smelters also cut their scrap copper buying prices 0.50c on October 11 to a basis of 22.75c for No. 2 heavy copper and wire.

While the price cut by producers had been anticipated, the size of the reduction (3.00c a pound) took the entire industry by surprise. It had been expected that the producers would come down to a 31.00c level, which level had been established by custom smelters on October 3.

It was surmised in trade circles that the price cut was made drastic deliberately so as to lessen the foreign competition of semi-fabricated and fabricated products in the domestic market. Foreign fabricators have been underselling the domestic mills in spite of the U. S. import duties. It also was surmised that the drastic cut in price would force a more realistic curtailment in foreign output.

Curtailment Picture

Six producers of copper, at this writing, have indicated they were planning some form of copper production cutbacks. The Rhodesian producers were among the first to act. The Rhodesian Selection Trust Ltd. announced it was cutting production by about 22,000 tons annually. Anglo American Corp. reported it had decided to "reduce by 10 per cent the amount of copper marketed by companies in the group. This is equivalent to about 3,000 long tons a month. The companies will, from time to time, determine whether the 10 per cent reduction should be achieved by cutting production or alternatively by holding copper in stock."

Noranda Mines, Ltd., confirmed it has been implementing the curtail-

ment program that was announced to its shareholders earlier this year, namely 1 per cent per month beginning July toward a total 10 per cent cutback. Output by Noranda mines in the 1960 second half is expected to be down about 5,000 tons.

Phelps Dodge Corp., on announcing its price reduction to 30.00c, also stated that when it resumed operations in March following the strike, it reopened at 94 per cent of capacity and steps are now being taken to make a further modest curtailment to 90 per cent of capacity.

Union Miniere du Haut Katanga on October 17 reversed its previous stand and said it will cut copper output by 10 per cent, or about 2,500 tons a month, effective immediately. The company has been producing copper at around 310,000 tons annually.

International Nickel Co. of Canada said it was not curtailing copper output since its production is a by-product of its nickel operations. But a company spokesman said he expected Inco would continue to add to its copper inventories.

The London market did not appear to be impressed by the announced cutbacks in copper production (particularly in the Rhodesian Copperbelt), by the continued strike in Chile, by racial unrest in Southern Rhodesia, and by the political uncertainties in the Congo. The price on the LME, before and after the reduction in the U. S. producer and custom smelter quotation to \$30.00c, continued to ease. On October 18 the bid for spot copper on the LME closed at £220 10s a long ton, equivalent to 27.5625c a pound.

The strike at Anaconda's Chile mine, Chuquicamata, which started on October 1, was still under way on October 18; both sides in the labor dispute did not appear to be any closer to a settlement. The mine, before the strike, had been producing about 25,000 tons of copper a month.

September Copper Figures

September copper statistics showed that: deliveries of refined copper to domestic consumers gained about 15,000 tons; domestic refined stocks in producers' hands were down about 13,000

tons at the end of the month; deliverise to foreign consumers were down close to 6,000 tons and foreign stocks gained 8,600 tons; world crude output on a per diem basis set an all-time high in September; and world refined stocks were down close to 4,500 tons.

Domestic refined copper statistics for September follow in tons, with the August totals in parentheses: production, 147,934 (157,382); deliveries to fabricators, 120,585 (105,417); stocks at end of month, 84,316 (97,379).

Lead, Zinc Consumption

Increased consumption of lead and zinc over the next five years was forecast by Andrew Fletcher, chairman, St. Joseph Lead Co., in St. Louis on October 17.

Mr. Fletcher said domestic lead use, by 1964, should reach an annual rate of 1,400,000 tons, 29 per cent higher than in 1959, while zinc use could climb to 1,200,000 tons, or 28 per cent higher than last year's 940,000 tons. The St. Joe chairman based his projections on estimated population growth and observed industry activity. He cautioned that the growth in lead and zinc consumption "may occur in cycles rather than in a straight line."

Demand for lead showed signs of picking up at this writing. Consumers who normally come in about this time each month to cover their next month's requirements, figure as buyers. The business was booked at 12.00c New York and also at the November average.

Sees Zinc Price Holding

Howard I. Young, president of American Zinc, Lead & Smelting Co., stated that on the basis of current supplies and rate of consumption, "I see no reason for a decline in the price of slab zinc below the current 13-cents a pound level." Admitting that "shipments aren't what the industry expected earlier in the year," Mr. Young said, "industry shipments in October look better than September and may exceed the latter month by 10 per cent to 15 per cent." He added that the improvement in October reflected higher demand from auto makers and some improvement in the steel industry.

Zinc producers, meanwhile, have been booking a moderate volume of business for October and November shipment. The bulk of the business involved Prime Western metal and the orders were placed both at the average and the spot quotation of 13.00c East St. Louis.

September Zinc Statistics

Domestic shipments of all grades of zinc in September exceeded pro-

duction by 8,178 tons, so that the producers' stocks at the end of that month were reduced by that amount. September statistics for all grades of zinc follow in tons, with the August totals in parentheses: production, 60,004 (63,840); shipments to domestic consumers, 58,137 (64,287); shipments to all destinations, 68,182 (70,255); stocks at end of the month, 192,466 (202,644).

Mine-Mill, Asarco Pact

National agreement on a one-year extension of present two-year contracts with American Smelting & Refining Co. was announced by the Asarco bargaining coordinator of the Denver-headquartered International Union of Mine, Mill and Smelter Workers. Agreement also was reached on a new pension plan, Mine-Mill said.

Spot Tin Higher

Spot Straits tin was quoted at 103.125c a pound New York on October 17, as against the last previous price quoted in this space of 102.00c for September 16. During the September 16-October 17 period the high of 103.75c was registered on October 6, 10, 11 and 12, and the low of 102.00c occurred on September 16, 19 and 20.

Aluminum Unchanged

Leading producers maintained their price of 26.00c a pound, f.o.b., for the 99.5 per cent minimum, 50-pound primary aluminum ingot. Earlier in the month, on October 3, leading smelters reduced their secondary aluminum ingot prices 1.00c a pound across-the-board.

Export of crude aluminum continued at a high rate in August, the Business and Defense Services Administration reported. Exports totaled 58.6 million pounds as against 37.2 million pounds in July. Exports for the first eight months of this year came to 418.9 million pounds compared with 100.5 million pounds in 1959.

Quicksilver, silver and platinum prices were unchanged during the month in review. Quicksilver held at \$208-\$210 per flask of 76 pounds, silver was steady at 91.375c an ounce, and platinum was maintained at \$81-\$85 an ounce.

The selling price of cadmium was increased 10.00c a pound on September 28 to \$1.60 a pound in quantities up to one ton. Larger quantities were available at various discounts.

The rise in the cadmium price was considered long overdue and in view of the tight supply situation, the advance was considered moderate. The Bunker Hill strike has cut down the output of cadmium and domestic

consuming goods has been exceptionally good. Added to this was the good export demand for the metal.

A price reduction of approximately 5 per cent on standard type of tungsten powder was announced by Salvania's Chemical and Metallurgical Division, effective August 29.

British Metal Markets

(Continued from Page 15)
for the appropriate half of the third following month as has been the case hitherto.

World Zinc Supplies

Whilst in the case of lead the International Study Group's figures at its September meeting were rather more cheerful on a world basis than those relating to the market outside the U. S. A., the reverse was the case with zinc. The estimated global surplus for 1960 of 74,000 tons compared with an earlier estimate of a deficit of 78,000 tons, but the bulk of this variation of 152,000 tons is accounted for by the sharp falling off in U. S. consumption compared with earlier estimates.

Similarly, an estimated world surplus for 1961 of 102,000 tons can be more or less halved by the Study Group's admission that the consumption estimate is probably 50,000 tons too low, and a number of people consider that the estimated rise in smelter output next year of 164,000 tons (excluding the Soviet Bloc) is probably over-optimistic. Several new plants are scheduled to begin operations next year it is true, but normal teething troubles may well keep their initial output low.

The setback in the motor car trade here and also on the Continent as well as in America, is bound to affect the overall consumption of zinc, both in diecastings and to a lesser extent in brass. In Britain the consumer durable goods trade is also suffering from the credit restrictions, and this too affects the demand for diecastings. However, the general level of zinc consumption remains pretty good, especially in Europe and Japan.

On October 2, dealings began in the new L. M. E. standard zinc contract, the remarks under lead applying equally to this metal. In zinc as in the other major metals there was a substantial fall in U. K. consumption in July, owing to the impact of the holidays, and August — another holiday month — showed only a very modest recovery according to advance estimates.

Daily Metal Quotations for September, 1960

The following quotations are taken from the Daily Metal Reporter*
(In Cents Per Pound)

SEPTEMBER	Copper			Tin		Lead		Zinc			Alumi- num†	Anti- mony	Silver				
	Producers' Price Delivered	Custom Smelters' Price, Del.	Electro Refinery	Lake Del.	Aver. Prompt Electrolytic Export Price F.a.s. N. Y.	Spot	Straits New York	Outside St. Louis	Prime West. E. o. b. St. Louis	Prime West. Del. N. Y.				Brass Spec. F. o. b. St. Louis	High Grade Delivered	Spec. High Grade Delivered	50-Lb. Ingot 99 1/2% Min. F. o. b.	Domestic Spot 99.5% F. o. b. Laredo	(Cents Per Ounce) New York
1	33.00	33.00	32.60	33.00	30.00	102.50	102.375	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
2	33.00	33.00	32.60	33.00	30.00	102.75	102.625	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
6	33.00	33.00	32.60	33.00	29.75	102.625	102.50	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
7	33.00	33.00	32.60	33.00	29.75	102.375	102.25	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
8	33.00	33.00	32.60	33.00	29.75	102.375	102.25	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
9	33.00	33.00	32.60	33.00	29.75	101.875	101.875	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
12	33.00	33.00	32.60	33.00	29.75	102.25	102.25	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
13	33.00	33.00	32.60	33.00	29.75	102.50	102.50	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
14	33.00	33.00	32.60	33.00	29.75	102.00	102.00	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
15	33.00	33.00	32.60	33.00	29.75	101.75	101.75	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
16	33.00	33.00	32.60	33.00	29.75	102.00	102.00	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
19	33.00	33.00	32.60	33.00	29.50	102.00	102.00	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
20	33.00	33.00	32.60	33.00	29.75	102.00	102.00	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
21	33.00	33.00	32.60	33.00	29.75	102.25	102.25	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
22	33.00	33.00	32.60	33.00	29.75	102.25	102.25	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
23	33.00	33.00	32.60	33.00	29.75	102.25	102.25	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
26	33.00	33.00	32.60	33.00	29.50	102.25	102.25	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
27	33.00	33.00	32.60	33.00	29.50	102.25	102.25	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
28	33.00	33.00	32.60	33.00	29.50	103.00	103.00	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
29	33.00	33.00	32.60	33.00	29.375	103.50	102.50	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
30	33.00	33.00	32.60	33.00	29.375	103.25	102.25	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
AV.	33.00	33.00	32.60	33.00	29.679	102.381	102.256	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
HI	33.00	33.00	32.60	33.00	30.00	103.50	103.00	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	
LO.	33.00	33.00	32.60	33.00	29.25	101.75	101.75	12.00	11.80	13.00	13.50	14.35	14.50	26.00	29.00	91.375	

*When split quotations prevail the daily average price is listed. The highs and lows for the month take into consideration the levels reached at both sides of such ranges.
† Price prior to August 1, 1960, was 28.10c, based on 50-lb. ingot, 99 1/2% plus.

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

	Crude Production		(In tons of 2,000 pounds)			Stock Increases or Decreases		
	Primary	Secondary	Refined Production	Deliveries to Customers	Refined Stock End of Period	Blister	Refined	Total
1957								
Total	2,897,719	123,270	3,035,588	2,853,307	458,340	-14,599	+103,920	+89,321
1958								
Total	2,713,412	138,696	2,811,108	2,918,404	262,544	+41,000	-195,796	-154,796
1959								
November	192,353	10,631	186,496	229,281	311,049	+16,388	-19,389	-3,001
December	211,575	9,767	203,614	238,095	293,006	+17,728	-18,043	-315
Total	2,860,454	134,583	2,926,657	2,973,026	293,006	+68,380	+28,774	+97,154
1960								
January**	259,779	13,116	257,614	272,040	304,038	+15,278	-3,426	+11,852
February	271,765	14,578	269,952	280,656	302,351	+16,391	-1,687	+14,704
March	307,964	12,192	303,503	307,572	300,790	+15,759	-1,561	+14,198
April	302,268	17,477	326,403	319,037	309,357	-6,658	+8,567	+1,909
May	301,070	17,248	323,167	321,783	312,666	-4,849	+3,309	-1,540
June	302,703	16,786	329,518	305,964	338,202	-10,029	+25,536	+15,507
July	294,052	13,584	299,427	268,191	371,306	+8,209	+33,104	+41,313
August	295,318	16,257	330,365	319,337	383,305	-18,790	+11,999	-6,791
September	306,264	12,718	322,575	328,660	378,845	-3,593	-4,460	-8,053

In U. S. A.

1957								
Total	1,116,380	112,060	1,616,964	1,277,946	181,024	.....	+60,379	.....
1958								
Total	1,008,170	131,294	1,446,540	1,179,416	80,722	.....	-100,302	.....
1959								
November	18,351	9,710	37,299	83,626	74,642	.....	-3,666	.....
December	26,686	8,595	46,302	90,039	64,763	.....	-9,879	.....
Total	805,875	121,462	1,221,612	1,312,328	64,763	.....	-17,647	.....
1960								
January	65,677	10,707	86,491	102,829	68,550	.....	+3,787	.....
February	85,899	12,628	105,417	111,851	64,007	.....	-4,543	.....
March	107,514	9,166	131,308	126,776	61,598	.....	-2,409	.....
April	104,895	14,765	153,053	129,663	63,373	.....	+1,775	.....
May	104,272	13,857	147,050	108,266	65,328	.....	+1,995	.....
June	95,522	13,585	161,073	106,207	87,667	.....	+22,339	.....
July	91,238	10,822	132,697	83,788	93,102	.....	+5,435	.....
August	85,579	13,368	157,382	105,417	97,379	.....	+4,277	.....
September	97,467	10,150	147,934	120,585	84,316	.....	-13,063	.....

Outside U. S. A.*

1957								
Total	1,781,339	11,210	1,418,624	1,575,361	277,316	.....	+43,541	.....
1958								
Total	1,705,242	7,402	1,364,568	1,738,988	181,822	.....	-95,494	.....
1959								
November	173,902	921	149,197	145,655	236,407	.....	-15,723	.....
December	184,889	1,172	157,312	148,056	228,243	.....	-8,164	.....
Total	2,054,579	13,121	1,705,045	1,660,698	228,243	.....	+46,421	.....
1960								
January**	194,099	2,409	171,123	169,211	235,488	.....	-7,213	.....
February	185,866	1,950	164,535	168,805	238,344	.....	+2,856	.....
March	199,550	3,023	172,145	180,796	239,192	.....	+848	.....
April	197,373	2,712	173,350	189,374	245,984	.....	+6792	.....
May	195,278	3,391	174,298	210,868	247,338	.....	+1,354	.....
June	207,181	3,201	168,445	199,757	250,535	.....	+3,197	.....
July	202,814	2,762	166,730	184,403	278,204	.....	+27,669	.....
August	209,736	2,421	172,983	213,920	285,926	.....	+7,722	.....
September	208,797	2,568	174,641	208,075	294,529	.....	+8,603	.....

* Excludes production of Russia, Japan, Yugoslavia, Norway, Sweden, Finland, the Messina Mine in Transvaal and output of several other small producing countries from which reports are not available. Represents approximately 90 per cent of Free World.

** Starting with January, 1960, figures include production from Australia and additional production from Europe.

Electrolytic Copper

	Producers' Price, Del. Valley			
	Monthly Average Prices			
	(Cents Per Pound)			
	1957	1958	1959	1960
Jan.	36.00	25.69	29.00	33.00
Feb.	33.318	25.00	29.972	33.00
Mar.	32.00	25.00	31.14	33.00
Apr.	32.00	25.00	31.50	33.00
May	32.00	25.00	31.50	33.00
June	30.955	25.36	31.50	33.00
July	29.25	26.125	30.587	33.00
Aug.	28.639	26.50	30.00	33.00
Sept.	27.031	26.50	30.571	33.00
Oct.	27.00	27.548	30.75	...
Nov.	27.00	29.00	32.375	...
Dec.	27.00	29.00	33.00	...
Aver.	30.183	26.31	30.991	...

Electrolytic Copper

	Custom Smelters' Price, Del. Valley			
	Monthly Average Prices			
	(Cents Per Pound)			
	1957	1958	1959	1960
Jan.	34.87	24.577	29.429	35.00
Feb.	32.273	23.557	30.361	35.00
Mar.	30.952	23.326	33.31	33.609
Apr.	31.24	23.66	32.84	33.00
May	30.163	23.865	32.00	33.00
June	29.60	25.52	31.477	33.00
July	28.39	29.231	29.52	33.00
Aug.	27.862	26.52	30.056	33.00
Sept.	25.948	26.355	33.00	33.00
Oct.	25.722	28.577	33.00	...
Nov.	25.435	29.829	Nom.	...
Dec.	25.26	28.846	35.00	...
Aver.	28.93	25.905	31.808	...

Lake Copper

	Producers' Price Delivered			
	Monthly Average Prices			
	(Cents Per Pound)			
	1957	1958	1959	1960
Jan.	36.00	25.69	29.00	33.00
Feb.	33.182	25.00	30.00	33.00
Mar.	32.00	25.00	31.14	33.00
Apr.	32.00	25.00	31.50	33.00
May	32.00	25.00	31.50	33.00
June	30.955	25.00	31.50	33.00
July	29.25	25.75	30.587	33.00
Aug.	28.611	26.50	30.00	33.00
Sept.	27.031	26.50	30.571	33.00
Oct.	27.00	27.577	31.50	...
Nov.	27.00	29.00	32.833	...
Dec.	27.00	29.00	33.00	...
Aver.	30.162	26.251	31.222	...

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consumed by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1954						
Total	360,526	58,125	304,619	136,581	1,231,840	— 22,549
1955						
Total	.....	.....	.....	.....	1,418,241	.....
1956						
Total	.....	.....	.....	.....	1,416,378	.....
1957						
Sept.	425,168	80,436	344,530	144,538	106,927	+ 16,536
Oct.	420,130	80,774	341,869	138,420	119,161	+ 20,615
Nov.	428,520	68,249	345,832	128,719	98,725	+ 22,218
Dec.	430,171	75,627	347,465	138,631	83,067	+ 19,702
Total	.....	.....	.....	.....	1,279,086	.....
1958						
Jan.	445,514	57,917	348,426	123,756	94,642	+ 31,249
Feb.	452,673	52,342	351,035	128,330	86,625	+ 25,650
Mar.	448,125	71,693	346,875	141,387	83,694	+ 31,556
Apr.	450,443	76,602	347,607	145,623	79,613	+ 33,814
May	441,001	78,194	346,404	138,190	88,447	+ 34,601
June	433,526	72,383	330,301	145,162	109,011	+ 30,448
July	431,706	77,362	326,263	153,529	79,353	+ 29,366
Aug.	421,931	78,194	323,667	150,436	96,717	+ 26,022
Sept.	416,887	71,025	319,281	145,390	105,474	+ 28,941
Oct.	399,113	91,019	315,929	156,692	138,017	+ 17,511
Nov.	419,914	88,580	328,238	157,799	110,487	+ 22,457
Dec.	447,123	90,401	326,438	177,869	92,573	+ 35,217
Total	.....	.....	.....	.....	1,165,364	.....
1959						
Jan.	457,387	101,182	337,761	172,698	108,556	+ 44,070
Feb.	459,046	123,321	390,522	183,113	116,565	+ 58,732
Mar.	449,441	130,785	334,904	211,547	133,259	+ 33,775
Apr.	463,582	125,250	337,282	204,618	120,680	+ 46,932
May	474,657	133,694	338,835	210,424	124,060	+ 59,092
June	492,072	111,229	343,585	191,875	133,702	+ 67,841
July	518,699	110,367	357,474	193,338	81,500	+ 68,254
Aug.	487,259	97,786	359,049	191,476	121,563	+ 34,520
Sept.	462,880	111,675	360,760	206,254	116,880	+ 7,541
Oct.	431,612	119,806	347,136	211,359	100,302	— 7,077
Nov.	412,401	127,162	338,856	224,442	102,837	— 23,735
Dec.	414,757	130,324	340,349	202,775	88,706	+ 1,957
Total	.....	.....	.....	.....	1,347,610	.....
1960						
Jan.	414,652	141,860	340,233	193,300	102,295	+ 22,979
Feb.	423,131	132,696	343,196	165,991	103,072	+ 46,640
Mar.	441,026	119,963	348,081	134,461	108,881	+ 78,447
Apr.	457,070	99,814	357,711	111,062	113,619	+ 88,111
May	457,644	85,491	360,770	117,150	107,838	+ 65,215
June	451,982	90,527	364,301	132,070	112,223	+ 46,138
July	459,620	87,798	372,186	126,281	75,650	+ 48,951
Aug.	457,421	81,338	373,186	122,415	107,616	+ 43,026

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Jan.	6,640	4,628	6,486	9,850	11,047	14,322	17,506	16,024	14,511	15,165
Feb.	5,153	3,833	10,337	8,490	15,198	14,497	11,145	9,518	14,712	14,514
Mar.	7,912	5,243	19,991	9,738	12,198	15,921	18,934	11,783	19,522	11,676
Apr.	8,563	6,214	16,583	9,004	13,162	17,233	14,288	15,279	17,525	17,543
May	8,458	8,033	10,867	8,687	15,133	20,805	12,397	13,989	13,960	16,497
June	8,628	4,425	10,945	13,309	14,765	14,758	11,949	13,945	15,065	15,769
July	6,642	5,188	9,063	10,260	9,988	12,632	8,926	12,185	11,144	12,609
Aug.	6,113	5,093	7,137	10,100	12,197	12,510	11,645	11,896	7,468	16,400
Sept.	3,561	4,667	9,042	10,641	15,037	9,518	9,756	9,268	10,070	12,559
Oct.	3,336	4,602	10,065	11,662	12,897	15,570	13,151	23,088	12,860	.....
Nov.	3,179	4,724	7,815	10,879	9,865	11,369	11,146	16,425	11,773	.....
Dec.	4,538	6,208	11,476	14,876	13,180	14,613	11,237	10,796	10,594	.....
Total	71,812	62,470	129,798	127,440	154,714	173,748	147,080	164,196	159,507	.....

* As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(NET TONS)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Jan.	18,874	28,416	28,315	23,423	20,661	25,201	27,736	25,681	20,468	22,046	22,695
Feb.	18,487	27,168	24,211	25,429	19,959	25,349	24,949	20,769	17,413	23,746	23,129
Mar.	22,494	31,997	23,890	28,256	23,553	29,713	28,310	21,948	18,825	26,109	25,282
Apr.	22,118	30,473	22,547	25,044	24,746	27,641	25,808	23,507	18,009	26,115	20,413
June	25,093	33,817	21,274	20,818	22,348	23,141	18,842	18,888	17,962	22,922	19,625
July	21,609	32,016	18,947	19,321	17,074	18,513	17,364	16,695	16,658	20,346	14,887
Aug.	29,689	25,285	21,807	20,156	21,684	27,013	23,812	19,654	17,882	21,741	20,216
Sept.	28,811	22,285	22,770	21,463	22,464	26,349	20,929	19,670	20,540	22,685	18,259
Oct.	22,240	23,124	25,811	22,280	24,080	25,228	23,045	22,800	23,225	23,067	.....
Nov.	21,748	23,544	23,441	21,806	23,061	25,102	21,818	19,787	20,758	22,283	.....
Dec.	28,576	20,987	22,983	20,541	21,274	21,448	18,046	16,875	18,676	19,535	.....
Total	303,563	332,378	277,736	271,261	263,233	296,406	274,096	248,297	227,607	274,562	.....
Aver.	25,297	27,615	23,145	22,694	21,938	24,867	22,841	20,681	18,133	22,864	.....

Mine Production of Copper in United States

	(U. S. Bureau of Mines) (In short tons)			
	Eastern	Missouri	Western	Total
1957				
Ttl.	79,369	1,800	995,753	1,076,922
1958				
Ttl.	76,849	1,250	902,021	980,304
1959				
Mar.	6,513	140	91,681	98,334
Apr.	7,240	150	93,209	100,599
May	7,007	110	94,493	101,610
June	7,245	124	87,035	94,404
July	6,763	111	80,058	86,932
Aug.	6,813	116	47,910	54,839
Sept.	6,655	123	20,342	27,120
Oct.	7,092	152	22,669	29,913
Nov.	3,226	140	22,529	25,895
Dec.	3,228	128	22,504	25,860
Ttl.	74,255	1,550	754,630	830,435
1960				
Jan.	3,904	107	43,845	47,856
Feb.	3,819	114	71,257	75,190
Mar.	7,229	96	88,931	96,256
Apr.	7,149	97	90,288	97,534
May	7,530	77	91,152	98,759
June	7,296	97	87,839	95,232
July	6,096	76	82,832	89,004

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass
1958				
Aver	21.788	20.282	18.035	18.047
1959				
Aug.	25.762	24.762	22.012	23.762
Sept.	26.369	24.869	22.319	24.369
Oct.	27.929	25.405	23.155	24.905
Nov.	30.00	26.208	23.958	24.528
Dec.	29.50	25.993	23.743	24.239
Av.	27.321	25.377	23.102	24.774
1960				
Jan.	30.025	26.30	24.05	24.55
Feb.	29.868	25.75	23.50	24.00
Mar.	27.207	24.038	21.788	22.071
Apr.	27.063	24.256	22.006	22.256
May	26.548	24.369	22.119	22.368
June	26.557	24.455	22.205	22.455
July	27.575	25.075	22.825	23.075
Aug.	27.962	25.81	23.56	23.81
Sept.	26.888	24.888	22.638	22.888

*Of dry content for material having a dry copper content in excess of 60%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)
(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1958				
Aver	21.777	20.277	18.653	13.024
1959				
Aug.	25.762	24.262	21.286	14.81
Sept.	26.369	24.869	22.304	16.50
Oct.	27.595	25.405	22.19	16.048
Nov.	29.00	26.208	22.75	16.326
Dec.	28.50	25.993	22.50	16.00
Av.	27.120	25.377	21.567	15.52
1960				
Jan.	29.025	26.30	22.74	16.39
Feb.	28.408	25.75	22.00	16.00
Mar.	27.321	24.038	20.429	15.174
Apr.	27.063	24.256	20.613	15.15
May	26.548	24.369	20.613	15.083
June	26.715	24.455	20.25	15.193
July	27.375	25.075	21.075	15.875
Aug.	27.712	25.81	21.679	15.951
Sept.	26.638	24.888	21.762	16.363

Lead Statistics Reported by American Bureau of Metal Statistics

Lead Refineries in U. S. A. and Outside U. S. A.

(Recoverable Lead Content in Tons of 2,000 Pounds)

Combined U. S. A. and Outside U. S. A.

	REFINED PRODUCTION			DELIVERIES			STOCKS		
	Pig	Antimonial Lead Content	Total	Pig	Antimonial Lead Content	Total	Pig	Antimonial Lead Content	Total
1958									
Total ..	1,485,282	106,383	1,591,665	1,307,390	102,697	1,410,087	.....	.....	.....
1959									
Total ..	1,406,485	105,943	1,512,418	1,422,985	106,666	1,529,651	.....	.....	.....
1960									
Jan. ..	131,753	9,395	141,148	124,705	7,413	132,118	*281,530	*20,280	301,810
Feb. ..	127,595	8,977	136,572	121,803	9,539	131,342	287,322	19,719	307,041
Mar. ..	128,203	8,490	136,693	122,013	8,327	130,340	293,512	19,882	313,394
Apr. ..	137,979	7,574	145,553	107,128	7,691	114,819	324,400	19,765	344,165
May ..	130,426	11,126	141,552	125,126	8,556	133,682	329,700	22,335	352,035
June ..	117,093	8,181	125,274	113,103	9,361	122,464	333,690	21,155	354,845
July ..	117,065	9,290	126,355	105,097	7,187	112,284	345,658	23,258	368,916
Aug. ..	112,994	9,157	122,151	127,102	9,474	136,576	331,550	22,941	354,491

U. S. A.

1958									
Total ..	473,208	46,985	520,193	589,528	49,893	639,421	.....	.....	.....
1959									
Total ..	343,726	34,628	378,354	596,214	42,312	638,526	.....	.....	.....
1960									
Feb. ..	33,742	2,570	36,312	56,569	2,659	59,228	152,299	12,464	164,763
Mar. ..	35,018	2,070	37,088	40,536	2,289	42,825	158,023	12,399	170,422
Apr. ..	37,465	2,186	39,651	36,572	2,267	38,839	164,875	12,514	177,389
May ..	33,474	3,296	36,770	47,433	2,664	50,097	170,208	13,426	183,634
June ..	31,188	2,094	33,282	46,753	2,921	49,674	169,879	12,837	182,716
July ..	26,906	2,227	29,133	34,595	2,003	36,598	171,825	13,328	185,153
Aug. ..	29,936	2,532	32,468	47,569	2,871	50,440	171,356	13,221	184,577

Outside U. S. A.

1958									
Total ..	1,012,074	59,398	1,071,472	717,862	52,804	710,666	.....	.....	.....
1959									
Total ..	1,062,759	71,315	1,134,074	826,771	64,453	891,125	.....	.....	.....
1960									
Feb. ..	93,853	6,407	100,260	65,234	6,880	72,114	135,023	7,255	142,278
Mar. ..	93,185	6,420	99,605	81,477	6,038	87,515	135,489	7,483	142,972
Apr. ..	100,514	5,388	105,902	70,556	5,424	75,980	159,525	7,251	166,776
May ..	96,952	7,830	104,782	77,693	5,892	83,585	159,492	8,909	168,401
June ..	85,905	6,087	91,992	66,350	6,440	72,790	163,811	8,318	172,129
July ..	90,159	7,063	97,222	70,502	5,184	75,686	173,833	9,930	183,763
Aug. ..	83,058	6,625	89,683	79,533	6,603	86,136	160,194	9,720	169,914

* Stocks on Jan. 1, 1960 are not comparable to those reported for Dec. 31, 1959 due to changes in the basis by reporting areas.

Summary of Lead Statistics for United States

Recoverable Lead Content in Tons of 2000 Pounds	Raw Material at Smelter	Stocks (end of period)				Smelter Receipts			
		Base Bullion	At Smelter & Transit	At Refinery Process	Refined Pig and Antimonial	Total	Primary U.S.A.	Outside U.S.A.	Scrap
1958									
Total ..							297,687	191,415	29,080
1959									
Total ..							244,803	125,100	20,596
1960									
January ..	78,131	4,003	37,013	168,472	287,619	21,094	26,442	1,900	49,436
February ..	86,087	2,680	36,748	164,763	290,278	24,719	15,822	2,136	42,677
March ..	93,108	5,029	36,866	170,422	305,425	29,979	17,105	2,128	49,212
April ..	89,421	3,639	39,950	177,389	310,399	27,863	9,264	2,207	39,334
May ..	98,470	4,402	36,979	183,634	323,485	22,537	17,959	2,048	42,544
June ..	95,364	5,210	39,928	182,716	323,218	20,895	11,717	1,337	33,949
July ..	93,153	5,234	45,446	185,153	328,986	19,466	11,957	1,285	32,708
August ..	90,346	5,847	48,304	184,577	329,074	20,002	9,105	1,874	32,981
1958									
Total ..		512,323		473,208	46,985	520,193	589,528	49,893	639,421
1959									
Total ..		381,656		343,726	34,628	378,354	596,214	42,312	638,526
1960									
January ..		40,593		37,497	2,414	39,911	49,498	2,304	51,802
February ..		34,326		33,742	2,570	36,312	56,569	2,659	59,228
March ..		41,673		35,018	2,070	37,088	40,536	2,289	42,825
April ..		42,436		37,465	2,186	39,651	36,572	2,267	38,839
May ..		33,106		33,474	3,296	36,770	47,433	2,264	50,097
June ..		36,525		31,188	2,094	33,282	46,753	2,921	49,674
July ..		34,457		26,906	2,227	29,133	34,595	2,003	36,598
August ..		35,271		29,936	2,532	32,468	47,569	2,871	50,440

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production: Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1954	81,152	551,618	632,770	92,719	475,551
1955	28,855	547,153	639,872	31,089	531,339
1956	.....	613,293	644,382	.....	529,484
1957	.....	604,353	645,534	.....	463,060
1958	.....	522,956	614,554	.....	380,359
1959	.....	.....	.....	.....	.....
February	208,874	39,498	248,372	214,946	30,685
March	214,946	39,238	254,184	210,524	40,980
April	210,524	40,606	251,130	197,823	52,469
May	197,823	39,101	236,924	171,577	65,207
June	171,577	37,459	209,036	133,235	75,465
July	133,235	32,882	166,117	142,694	22,380
August	142,694	25,589	168,283	124,259	43,850
September	124,259	14,801	139,060	117,296	21,795
October	117,296	18,892	136,188	115,418	20,552
November	115,418	18,796	134,214	114,303	19,869
December	114,303	30,160	144,463	119,993	24,516
Total	.....	380,674	579,182	.....	450,983
1960	.....	.....	.....	.....	.....
January	119,993	40,043	160,036	117,589	42,083
February	117,589	36,435	154,024	116,269	37,599
March	116,269	37,192	153,461	109,148	44,076
April	109,148	40,177	149,325	118,329	30,686
May	118,329	36,509	154,838	123,148	31,690
June	123,148	33,448	156,596	129,859	26,725
July	129,859	29,270	159,129	135,858	23,169
August	135,858	32,623	168,481	138,365	30,001
September	138,365	29,638	168,003	138,584	29,406

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

	(American Bureau of Metal Statistics)				(In tons of 2,000 lbs.)			
	Cable	Amm.	Foil	Batt'y	Brass Making	Sundries	Jobbers	Unclassified
1955	.....	.....	.....	.....	.....	.....	.....	.....
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956	.....	.....	.....	.....	.....	.....	.....	.....
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716
1957	.....	.....	.....	.....	.....	.....	.....	.....
Total	58,444	25,452	1,691	64,761	7,420	53,284	11,127	240,881
1958	.....	.....	.....	.....	.....	.....	.....	.....
April	3,207	900	70	3,138	580	2,831	533	10,913
May	3,216	1,850	35	4,671	866	3,071	1,027	15,285
June	3,463	1,950	35	2,767	480	4,217	1,716	17,450
July	3,169	1,250	275	3,936	515	4,157	1,052	17,594
Aug.	3,481	2,415	70	4,992	400	6,399	100	16,397
Sept.	4,132	2,290	320	5,775	848	6,771	1,747	19,774
Oct.	3,243	2,450	...	4,548	285	6,210	1,641	28,270
Nov.	3,690	2,150	50	6,527	360	4,887	822	12,105
Dec.	2,267	2,100	50	6,216	215	2,578	652	10,774
Total	38,838	20,855	1,080	57,180	5,841	51,086	11,882	193,592
1959	.....	.....	.....	.....	.....	.....	.....	.....
Jan.	2,284	2,100	100	5,594	161	3,545	727	18,524
Feb.	2,988	1,225	50	5,254	735	2,706	931	16,796
Mar.	3,156	1,850	105	5,905	378	6,006	2,185	21,395
April	3,686	2,150	35	7,410	691	5,356	1,966	31,355
May	4,054	2,900	35	6,870	475	7,990	2,843	40,040
June	5,272	3,210	70	12,515	180	8,009	3,663	42,546
July	850	295	70	2,570	315	3,166	997	14,117
Aug.	3,268	1,150	205	3,073	410	6,640	1,921	27,183
Sept.	1,003	.....	35	3,401	255	2,296	1,484	13,321
Oct.	700	500	35	4,299	228	2,676	1,021	11,093
Nov.	2,630	200	70	3,714	205	2,566	797	9,687
Dec.	2,133	950	70	3,479	475	2,628	738	14,043
Total	32,024	16,530	880	64,084	4,508	53,584	19,273	260,100
1960	.....	.....	.....	.....	.....	.....	.....	.....
Jan.	2,138	3,352	105	3,268	550	4,786	1,106	26,778
Feb.	2,665	2,350	50	4,930	295	3,715	574	23,020
Mar.	2,221	1,500	...	8,195	1,050	8,298	2,133	20,679
Apr.	2,005	2,707	83	2,891	380	5,180	916	16,519
May	2,327	1,000	35	4,516	115	4,526	927	18,244
June	2,865	1,500	70	5,043	230	714	690	15,813
July	1,690	1,280	70	3,745	88	2,120	28	14,148
August	2,796	1,692	35	5,873	220	4,603	50	14,732
Sept.	2,049	2,208	35	4,439	469	3,371	255	16,579

Lead Prices at New York

(Common Grade)
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	16.00	13.00	12.619	12.00
Feb.	16.00	13.00	11.583	12.00
Mar.	16.00	13.00	11.42	12.00
Apr.	16.00	12.00	11.20	12.00
May	15.385	11.712	11.905	12.00
June	14.32	11.24	12.00	12.00
July	14.00	11.00	12.00	12.00
Aug.	14.00	10.85	12.286	12.00
Sept.	14.00	10.89	13.00	12.00
Oct.	13.704	12.673	13.00	...
Nov.	13.50	13.00	13.00	...
Dec.	13.00	13.00	12.523	...
Aver.	14.66	12.114	12.211	...

Lead Sheet Prices

(To Jobbers, Full Sheets)
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	21.50	18.50	18.119	17.50
Feb.	21.50	18.50	17.083	17.50
Mar.	21.50	18.50	16.92	17.50
Apr.	21.50	17.50	16.70	17.50
May	20.885	17.212	17.405	17.50
June	19.82	16.74	17.50	17.50
July	19.82	16.50	17.50	17.50
Aug.	19.50	16.35	17.786	17.50
Sept.	19.50	16.39	18.50	17.50
Oct.	19.204	18.173	18.50	...
Nov.	19.00	18.50	18.50	...
Dec.	18.50	18.50	18.023	...

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

	(In thousands of units)			
	1957	1958	1959	1960
Jan.	2,638	2,004	2,672	1,866
Feb.	1,961	1,803	1,791	1,641
Mar.	1,254	1,577	1,376	1,877
Apr.	1,178	1,242	1,437	1,545
May	1,605	1,454	1,593	1,650
June	1,878	1,773	2,118	2,072
July	2,469	2,101	2,556	2,131
Aug.	2,856	2,333	2,728	2,550
Sept.	2,688	2,704	2,889	2,698
Oct.	3,042	2,976	3,069	...
Nov.	2,359	2,262	2,799	...
Dec.	2,015	3,041	2,465	...
Total	25,943	25,270	27,493	...

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	—In base bullion (lead content)— At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti- monial lead	Total Stocks
1958							
June 1..	79,482	11,059	2,010	20,188	141,967	13,154	267,860
July 1..	80,060	9,012	1,570	22,092	150,648	12,856	276,238
Aug. 1..	83,347	12,438	860	21,615	154,378	10,482	283,379
Sept. 1..	77,416	14,767	1,176	20,444	158,413	10,889	283,105
Oct. 1..	72,724	14,797	2,223	18,125	159,662	11,004	278,535
Nov. 1..	61,819	11,492	1,086	19,041	157,385	12,050	262,873
Dec. 1..	62,960	11,072	1,565	20,941	167,493	11,828	275,859
1959							
Jan. 1..	72,378	10,917	1,767	19,746	185,913	12,595	303,316
Feb. 1..	72,832	10,565	1,889	21,317	197,085	11,789	315,477
Mar. 1..	62,383	11,707	1,447	21,479	202,835	12,111	311,962
Apr. 1..	68,433	14,352	350	20,575	198,459	12,065	314,234
May 1..	64,538	12,373	624	20,507	184,468	13,355	295,865
June 1..	55,223	12,239	766	20,391	157,981	13,596	260,196
July 1..	58,451	13,270	943	19,468	120,914	12,321	225,367
Aug. 1..	53,115	18,379	158	18,021	129,551	13,143	232,367
Sept. 1..	50,007	17,389	....	15,638	116,344	7,915	207,293
Oct. 1..	61,910	17,925	....	14,932	109,527	7,769	212,063
Nov. 1..	69,429	14,800	....	14,919	107,849	7,569	214,566
Dec. 1..	70,837	12,919	....	15,708	106,678	7,625	213,767
1960							
Jan. 1..	73,381	16,955	3,085	16,914	108,002	11,991	230,328
Feb. 1..	78,315	17,139	1,425	19,003	105,292	12,297	233,471
Mar. 1..	89,656	14,899	1,643	19,360	103,615	12,654	241,827
Apr. 1..	96,716	17,043	867	20,603	96,469	12,679	244,377
May 1..	92,969	16,519	1,581	22,124	105,498	12,831	251,522
June 1..	102,454	12,444	889	24,237	109,270	13,878	263,172
July 1..	99,230	15,371	1,461	24,600	116,638	13,221	270,521
Aug. 1..	96,675	19,414	2,302	25,578	122,130	13,728	279,827
Sept. 1..	93,921	25,290	1,175	24,190	124,711	13,654	282,941

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	—Receipts of lead in ore—			Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
	United States	Foreign	Total		
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955 Total	341,595	172,966	514,561	42,996	557,557
1956 Total	368,499	192,318	560,817	55,925	616,792
1957 Total	356,409	206,901	563,310	42,537	605,847
1958					
June	28,577	13,811	42,388	1,366	43,754
July	22,289	19,692	41,981	1,615	43,596
August	22,984	13,043	36,027	1,252	37,279
September	20,654	14,576	35,230	1,765	36,995
October	18,678	9,093	27,771	3,577	31,348
November	24,024	14,541	38,565	3,933	42,498
December	24,366	18,804	43,170	3,982	47,152
Total	285,164	188,144	473,308	30,115	503,423
1959					
January	24,304	19,449	43,753	3,138	46,891
February	22,253	8,660	30,913	1,747	32,660
March	21,897	21,012	42,909	1,328	44,237
April	22,339	10,998	33,337	1,196	34,533
May	21,645	5,202	26,847	1,930	28,777
June	23,634	12,368	36,002	2,431	38,433
July	19,165	11,695	30,860	2,199	33,059
August	19,971	2,821	22,792	1,009	23,801
September	13,591	3,465	17,056	32	17,088
October	14,740	3,648	18,388	133	18,521
November	13,808	4,582	18,390	133	18,523
December	21,208	20,977	42,185	5,269	47,454
Total	238,555	124,877	363,432	20,545	383,977
1960					
January	20,531	26,307	46,838	2,041	48,879
February	23,700	15,541	39,241	2,439	41,680
March	28,824	16,742	45,566	2,404	47,970
April	26,574	9,243	35,817	2,212	38,029
May	21,674	16,679	38,353	2,812	41,165
June	20,248	11,694	31,942	2,580	34,522
July	18,831	11,252	30,083	2,237	32,320
August	21,515	8,952	30,467	2,324	32,791

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

METALS, OCTOBER, 1960

N. Y. Lead Price Changes

(Effective Date)

1951		Apr. 12....14.00
Oct. 2...19.00		June 2....14.25
1952		June 15....14.00
Apr. 29....18.00		Aug. 25....14.25
May 2....17.00		Sept. 7....14.50
May 12....15.00		Sept. 15....14.75
June 23....15.50		Oct. 4....14.875
June 24....16.00		Oct. 5....15.00
Oct. 7....15.00		1955
Oct. 14....14.00		Sept. 23...15.00-
Oct. 22....13.50		15.50
Nov. 3....14.00		Sept. 26...15.50
Nov. 10....14.20		Dec. 29...16.00
Nov. 11....14.50		1956
Nov. 20....14.25		Jan. 4....16.50
Nov. 24....14.00		Jan. 13....16.00
Dec. 22....14.25		1957
Dec. 29....14.50		May 9....15.50
Dec. 31....14.75		May 16....15.00
1953		June 11....14.00
Jan. 7....14.50		Oct. 14....13.50
Jan. 12....14.00		Dec. 2....13.00
Feb. 2....13.50		1958
Mar. 4....13.90		Apr. 1....12.00
Mar. 10....13.50		May 14....11.50
Apr. 7....13.00		June 3....11.00
Apr. 16....12.50		June 18....11.50
Apr. 21....12.00		July 1....11.00
Apr. 29....12.50		Aug. 13....10.75
May 18....12.75		Sept. 17....11.00
May 19....13.00		Sept. 30....11.50
May 26....13.15		Oct. 2....12.00
June 11....13.50		Oct. 8....12.50
July 20....13.75		Oct. 14....13.00
July 23....14.00		1959
Sept. 16....13.50		Jan. 21....12.00
1954		Feb. 11....11.50
Jan. 18....13.00		Feb. 24....11.00
Feb. 18....12.50		Mar. 5....11.50
Mar. 9....12.75		April 1....11.00
Mar. 10....13.00		April 20....11.50
Mar. 26....13.25		May 7....12.00
Mar. 29....13.50		Aug. 24....13.00
Apr. 1....13.75		Dec. 14....12.50
		Dec. 21....12.00

**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A.B.M.S.)

End of	1957	1958	1959	1960
Jan. ..	10,487	12,689	11,789	12,297
Feb. ..	10,220	12,309	12,111	12,654
Mar. ..	5,091	3,527	4,098	2,332
Apr. ..	9,391	12,468	13,355	12,831
May ..	9,799	13,154	13,596	13,878
June ..	9,503	12,856	12,321	13,221
July ..	8,661	10,482	13,143	13,728
Aug. ..	9,553	10,889	7,915	13,654
Sept. ..	10,215	11,004	7,769	11,888
Oct. ..	11,581	12,050	7,569	....
Nov. ..	11,119	11,828	7,625	....
Dec. ..	11,857	12,595	11,991	....

Antimonial Lead Production by Primary Refineries

(A.B.M.S.)

End of	1957	1958	1959	1960
Jan. ..	5,114	3,743	3,541	2,538
Feb. ..	5,468	3,657	4,415	2,694
Mar. ..	9,794	12,144	12,065	12,679
Apr. ..	6,183	3,655	5,533	2,291
May ..	6,978	4,827	4,616	3,456
June ..	4,466	3,992	5,671	2,260
July ..	5,372	2,775	2,784	2,363
Aug. ..	7,967	5,244	2,185	2,701
Sept. ..	7,574	4,761	102	1,721
Oct. ..	6,148	5,849	886	....
Nov. ..	3,791	3,913	1,324	....
Dec. ..	3,290	4,539	2,656	....

Total 67,541 50,482 37,813

Lead Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons
except where otherwise noted.

	May	1960 June	July
IMPORTS			
U. S.* (s.t.)	12,326	16,929	20,185
Canada (s.t.)	3	...	...
Belgium	1,416	...	...
Denmark	401	2,353	510
France	8,454	3,059	5,368
Germany, W.†	6,895	8,430	...
Italy††	2,914	...	...
Netherlands	2,413	3,635	...
Norway	279	...	...
Sweden	911	...	...
Switzerland	1,203	1,490	1,977
U. K. (l.t.)	13,075	15,490	20,087
India† (l.t.)	3,114	1,218	...
EXPORTS			
U. S.* (s.t.)	750	382	18
Canada (s.t.)	6,979	9,521	7,955
Belgium	4,640	...	...
Denmark	9	6	29
France	542	616	328
Germany, W.†	2,934	1,534	...
Italy††	8	...	...
Netherlands	417	669	...
Sweden	3,325	...	...
Northern Rhodesia† (l.t.)	792	985	1,024
Australia (l.t.)	14,241	...	...

* Refined.

† Includes scrap.

† British Bureau of Non-Ferrous Metal Statistics.

†† Includes lead alloys.

French Lead Imports

(A. B. M. S.)

	June	1960 July	Aug.
(In metric tons)			
Ore (gross weight)	7,356	6,543	7,580
Canada	...	988	...
Morocco	5,355	5,555	6,186
Other countries	2,001	...	1,394
Pig lead	3,059	5,368	4,881
Belgium	685	1,128	1,517
Germany (W.)	275	632	517
Spain	100	...	...
Algeria	564	711	...
Morocco	385	1,223	1,114
Tunisia	644	1,394	1,733
Australia	...	280	...
Other countries	406	...	...
Antimonial lead	330	501	17

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	June	1960 July	Aug.
(Gross Weight)			
Lead and lead alloys	15,490	20,087	20,888
Australia	3,573	11,574	13,962
Canada	4,892	4,779	4,037
Peru	700	750	750
Other countries	6,325	2,984	2,139

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to
ADVERTISE
in the
DAILY METAL REPORTER**

U. S. Lead Consumption

(Bureau of Mines — in Short Tons)

	Jan.-July	1960 June	July
Metal Products:			
Ammunition	26,127	4,059	3,171
Bearing metals	12,479	1,623	1,352
Brass and bronze	12,097	1,886	1,108
Cable covering	34,980	5,298	3,270
Calking lead	39,370	6,706	6,058
Casting metals	4,040	570	546
Collapsible tubes	4,437	706	428
Foil	2,411	539	317
Pipes, traps and bends	13,741	2,173	1,887
Sheet lead	15,524	2,490	1,929
Solder	34,634	5,109	4,369
Storage battery grids, posts, etc.	97,537	14,567	12,228
Storage battery oxides	101,521	14,980	12,616
Terne metal	1,381	164	212
Type metal	15,074	2,090	1,892
Total	415,353	62,751	51,383
Pigments:			
White lead	5,013	1,210	594
Red lead and litharge	46,127	6,414	5,728
Pigment colors	6,905	1,052	625
Other*	1,479	258	230
Total	59,524	8,934	7,177
Chemicals:			
Tetraethyl lead	94,087	11,202	14,327
Miscellaneous chemicals	1,019	150	142
Total	95,106	11,352	14,469
Miscellaneous uses:			
Annealing	2,713	354	215
Galvanizing	785	97	76
Lead plating	35	4	...
Weights and ballast	4,325	653	518
Total	7,858	1,108	809
Other uses unclassified	10,083	1,348	952
Total reported†	587,924	85,493	74,790
Estimated unreported consumption	14,000	2,000	2,000
Grand total†	601,900	87,500	76,800
Daily average‡	2,826	2,917	2,477

* Includes lead content of leaded zinc oxide production.

† Includes lead content of scrap used directly in fabricated products.

‡ Based on number of days in month without adjustment for Sundays and holidays.

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — in Short Tons)

	Stocks June 31, 1960	Net Receipts in July	Consumed in July	Stocks July 31, 1960
Soft lead	68,448	57,626	51,643	74,431
Antimonial lead	43,498	16,041	16,548	42,991
Lead in alloys	7,279	2,840	2,754	7,365
Lead in copper-base scrap	905	984	911	978
Total	120,130	77,491	*71,856	125,765

* Excludes 2,724 tons of lead which went directly from scrap to fabricated products and 210 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — in Short Tons)

JULY					
	Soft lead	Antimonial lead	Lead in alloys	Lead in copper-base scrap	Total
Metal products	29,008	16,087	2,712	911	48,718
Pigments	6,947	20	...	...	6,967
Chemicals	14,469	...	...	...	14,469
Miscellaneous	368	441	...	...	809
Unclassified	851	...	42	...	893
Total	51,643	16,548	2,754	911	*71,856

* Excludes 2,724 tons of lead which went directly from scrap to fabricated products and 210 tons of lead contained in leaded zinc oxide production.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

	(In tons of 2,240 pounds)	1958	1959	1960
Jan.	29,607	28,872	31,745	...
Feb.	27,855	25,968	30,241	...
Mar.	29,713	26,691	35,066	...
Apr.	26,230	29,252	28,148	...
May	28,839	27,280	33,459	...
June	28,624	30,099	33,318	...
July	27,201	26,851	27,913	...
Aug.	21,726	25,358	...	...
Sept.	28,829	30,255	...	...
Oct.	31,356	32,926	...	...
Nov.	27,786	32,579	...	...
Dec.	27,154	31,772	...	...
Total	335,920	345,903	...	...

American Antimony

	Monthly Average Prices			
	In bulk, f.o.b. Laredo			
	(Cents per lb. in ton lots)			
	1957	1958	1959	1960
Jan.	33.00	33.00	29.00	29.00
Feb.	33.00	30.818	29.00	29.00
Mar.	33.00	29.00	29.00	29.00
Apr.	33.00	29.00	29.00	29.00
May	33.00	29.00	29.00	29.00
June	33.00	29.00	29.00	29.00
July	33.00	29.00	29.00	29.00
Aug.	33.00	29.00	29.00	29.00
Sept.	33.00	29.00	29.00	29.00
Oct.	33.00	29.00	29.00	...
Nov.	33.00	29.00	29.00	...
Dec.	33.00	29.00	29.00	...
Aver.	33.00	29.485	29.00	...

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1945, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

	Stock Begin- ning	Pro- duction	Shipments				Stock at End	Daily Avg. Prod.
			Domestic	Export & Drawback	Gov't Acc't	Total		
1950 Total	94,221	910,354	849,246	18,189	128,256	995,691	8,884	2,494
1951 Total	8,884	75,863	70,770	1,516	10,688	82,974	21,901	2,553
1952 Total	21,901	931,833	836,800	42,067	39,949	918,816	87,160	2,627
1953 Total	87,160	77,653	69,733	3,506	3,329	76,568	180,843	2,661
1954 Total	180,843	961,430	893,343	56,202	36,626	986,171	124,277	2,379
1955 Total	40,979	80,119	68,945	4,693	3,052	74,691	40,979	2,825
1956 Total	1,031,018	971,191	818,850	16,326	42,332	877,508	68,622	2,904
1957 Total	1,067,450	80,933	68,238	1,361	3,528	73,126	...	...
1958 Total	858,902	868,242	787,922	27,929	108,957	924,808	...	...
1959 Total	190,237	72,353	65,660	2,327	9,080	77,067	...	...
1960 Total	154,419	1,031,018	1,007,619	19,497	87,200	1,114,316	...	...
1961 Total	154,419	85,918	83,968	1,625	7,267	92,860	...	...
1962 Total	154,419	1,062,954	869,270	9,027	157,014	1,035,311	...	...
1963 Total	154,419	88,850	72,439	752	13,085	86,275	...	...
1964 Total	154,419	1,067,450	765,132	15,460	179,466	815,567	...	...
1965 Total	154,419	85,119	60,312	55	...	60,187	257,911	2,101
1966 Total	154,419	62,927	68,718	591	...	69,309	251,529	2,030
1967 Total	154,419	63,705	76,905	213	...	77,118	238,116	2,124
1968 Total	154,419	65,304	93,018	226	...	93,224	210,176	2,107
1969 Total	154,419	65,174	83,394	212	...	83,606	191,744	2,172
1970 Total	154,419	75,503	76,862	148	...	77,010	190,237	2,432
1971 Total	154,419	858,902	767,755	3,102	34,488	805,325	...	...
1972 Total	154,419	190,237	76,481	70,770	171	70,941	195,777	2,467
1973 Total	154,419	71,174	65,641	849	...	66,490	200,461	2,542
1974 Total	154,419	79,918	73,814	482	...	74,296	206,083	2,578
1975 Total	154,419	206,083	76,393	78,358	255	78,613	203,863	2,546
1976 Total	154,419	77,489	85,073	275	...	85,348	196,004	2,500
1977 Total	154,419	75,544	89,858*	204	2,100	102,162	169,386	2,518
1978 Total	154,419	169,386	59,460	94	900	60,454	182,033	2,358
1979 Total	154,419	182,033	69,768	864	...	59,782	192,019	2,251
1980 Total	154,419	192,019	62,202	97,971	3,214	61,185	193,036	2,073
1981 Total	154,419	63,938	69,910	1,813	...	65,723	191,251	2,063
1982 Total	154,419	62,346	74,596	2,844	...	77,440	176,157	2,078
1983 Total	154,419	69,666	84,498	6,906	...	91,404	154,419	2,247
1984 Total	154,419	858,020	872,867	17,971	3,000	893,838	...	...
1985 Total	154,419	73,326	79,325	3,949	...	83,274	144,471	2,365
1986 Total	154,419	74,736	78,029	4,118	...	82,147	137,062	2,577
1987 Total	154,419	86,028	80,760	5,764	...	86,524	136,566	2,775
1988 Total	154,419	83,221	64,251	7,675	...	71,926	147,861	2,774
1989 Total	154,419	79,216	54,790	7,399	...	62,039	165,038	2,555
1990 Total	154,419	76,723	50,690	3,385	...	54,075	187,686	2,557
1991 Total	154,419	73,754	50,002	4,379	...	54,381	207,059	2,379
1992 Total	154,419	63,840	64,287	5,908	...	70,255	200,644	2,128
1993 Total	154,419	60,004	58,137	10,045	...	68,182	192,466	2,000

* Inflated by abnormal shipments on consignment of approximately 9,000 tons.

U. S. Consumption of Slab Zinc

Bureau of Mines
By Industries (Short Tons)

	Galvan- izers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1951 Total	386,373	266,442	141,456	64,000	28,738	887,009
1952 Total	375,563	236,022	155,311	51,508	30,885	849,289
1953 Total	403,162	305,346	177,901	53,784	33,037	977,636
1954 Total	398,599	286,817	107,293	45,979	33,342	876,130
1955 Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956 Total	421,218	352,451	122,395	45,382	36,251	983,097
1957 Total	355,796	358,543	111,114	39,544	20,486	924,063
1958						
May	30,935	18,316	6,597	2,896	2,263	61,907
June	34,377	21,497	6,643	2,961	2,212	67,690
July	30,677	17,387	6,275	2,848	1,920	60,007
August	34,663	20,382	8,358	3,379	1,901	70,033
September	34,048	25,188	9,624	3,458	770	74,122
October	36,513	27,682	11,753	3,845	881	81,919
November	31,658	27,311	10,067	3,276	826	74,302
December	31,746	29,926	10,529	3,681	1,018	78,082
Total	370,441	273,540	92,906	38,690	16,772	737,942
1959						
January	31,729	29,110	11,172	3,874	2,521	79,506
February	31,672	26,448	11,508	3,418	2,864	77,010
March	37,287	29,286	12,889	3,629	3,203	87,394
April	38,541	31,262	12,304	3,715	3,223	90,145
May	38,788	29,169	12,015	3,316	3,305	88,093
June	40,531	36,269	10,764	3,801	3,120	95,985
July	23,700	28,120	7,558	2,509	2,042	65,429
August	13,763	29,803	10,064	3,160	2,161	60,451
September	13,181	31,463	10,842	3,322	2,237	62,545
October	13,582	35,473	10,543	3,272	2,487	66,857
November	25,456	29,351	8,858	3,411	2,523	71,099
December	38,418	34,576	8,704	3,152	2,936	89,286
Total	346,648	370,330	127,221	40,759	22,622	933,800
1960						
January	38,389	31,813	9,838	3,130	3,352	88,122
February	35,001	34,829	9,259	3,250	3,156	87,365
March	36,206	31,889	10,108	3,309	3,403	86,515
April	31,319	24,483	7,097	3,032	3,033	71,164
May	31,503	22,957	7,697	3,402	3,386	70,545
June	31,882	25,625	8,541	3,181	2,814	73,883

METALS, OCTOBER, 1960

Prime Western Zinc Prices

(East St. Louis, f.o.b.)

	(Cents Per Pound)			
	(In tons of 2,240 pounds)			
	1957	1958	1959	1960
Jan.	13.50	10.00	11.50	12.90
Feb.	13.50	10.00	11.411	13.00
Mar.	13.50	10.00	11.00	13.00
Apr.	13.50	10.00	11.00	13.00
May	11.933	10.00	11.00	13.00
June	10.84	10.00	11.00	13.00
July	10.00	10.00	11.00	13.00
Aug.	10.00	10.00	11.00	13.00
Sept.	10.00	10.00	11.381	13.00
Oct.	10.00	10.865	12.233	...
Nov.	10.00	11.386	12.50	...
Dec.	10.00	11.50	12.50	...
Aver.	11.40	10.313	11.46	...

High Grade Zinc Prices

	(Delivered)			
	N. Y. Monthly Averages			
	(Cents Per Pound)			
	1957	1958	1959	1960
Jan.	14.85	11.35	12.50	14.244
Feb.	14.85	11.35	12.411	14.25
Mar.	14.85	11.35	12.00	14.25
Apr.	14.85	11.084	12.00	14.50
May	13.283	11.00	12.00	14.50
June	12.19	11.00	12.00	14.50
July	11.35	11.00	12.00	14.35
Aug.	11.35	11.00	12.006	14.35
Sept.	11.35	11.00	12.625	14.35
Oct.	11.35	11.865	13.483	...
Nov.	11.35	12.386	13.75	...
Dec.	11.35	12.50	13.75	...
Aver.	12.75	11.407	12.544	...

U. K. Zinc Consumption

(British Bureau of Non-Ferrous Metal
Statistics)

	(In Tons of 2,240 Pounds)		
	1958	1959	1960
Jan.	27,473	27,849	30,637
Feb.	24,551	25,676	30,480
Mar.	26,967	27,243	35,268
Apr.	24,984	28,006	28,069
May	24,579	26,167	30,848
June	25,587	30,221	33,058
July	23,794	26,318	25,594
Aug.	19,076	21,566	...
Sept.	26,747	31,270	...
Oct.	29,838	30,686	...
Nov.	26,432	29,221	...
Dec.	26,042	30,829	...
Total	306,070	335,890	...

IT PAYS
to
ADVERTISE
in the
DAILY METAL REPORTER

Mine Production of Zinc in United States (U. S. Bureau of Mines)

	(In short tons)			
	Eastern States	Central States	Western States	Total U.S.*
1954				
Total	166,487	63,100	234,942	464,539
1955				
Total	163,230	73,630	277,811	514,671
1956				
Total	175,310	61,080	301,253	537,643
1957				
Total	196,877	29,506	290,151	520,128
1958				
Total	180,373	10,050	221,582	412,005
1959				
Apr.	19,198	—	19,132	38,330
May	19,150	—	19,201	38,351
June	18,217	—	18,447	36,664
July	13,158	—	18,656	31,814
Aug.	14,410	140	16,661	31,211
Sept.	14,226	154	15,026	29,406
Oct.	15,608	200	15,979	31,487
Nov.	18,285	200	15,698	34,183
Dec.	19,609	106	15,757	35,472
Total	204,384	800	211,781	416,965
1960				
Jan.	20,962	226	15,795	36,983
Feb.	21,001	195	16,823	38,019
Mar.	22,794	347	19,725	42,866
Apr.	22,410	606	17,839	40,855
May	23,103	408	17,235	40,746
June	22,004	575	16,491	39,070
July	21,083	823	15,036	36,942
Aug.	18,805	902	13,315	33,022

*Includes Alaskan output in some months.

Mine Production of Lead in United States (U. S. Bureau of Mines)

	(In short tons)			
	Eastern States	Central States	Western States	Total U.S.*
1953				
Ttl.	9,970	136,650	188,776	335,412
1954				
Ttl.	8,608	138,940	169,804	317,352
1955				
Ttl.	10,379	145,640	177,409	333,409
1956				
Ttl.	11,395	141,900	195,034	348,329
1957				
Ttl.	9,300	135,800	188,392	333,493
1958				
Ttl.	6,439	118,114	142,824	267,377
1959				
Apr.	454	8,103	12,684	21,241
May	412	7,253	12,509	20,174
June	458	8,185	12,764	21,407
July	369	8,190	11,010	19,569
Aug.	353	9,762	11,735	21,850
Sept.	510	9,698	10,328	20,536
Oct.	548	10,012	10,755	21,315
Nov.	620	9,350	10,954	20,924
Dec.	550	8,734	10,572	19,856
Ttl.	6,535	105,435	141,290	253,260
1960				
Jan.	535	9,035	11,235	20,805
Feb.	555	9,611	12,267	22,433
Mar.	619	11,146	13,695	25,460
Apr.	647	9,716	12,750	23,113
May	624	9,395	10,720	20,738
June	585	9,749	9,002	19,356
July	598	8,301	8,462	17,361

Mine Production of Gold in United States (U. S. Bureau of Mines)

	Eastern States	Western States	Alaska*	Total
1955				
Ttl.	2,026	1,634,625	247,535	1,884,186
1956				
Ttl.	1,998	1,607,930	204,300	1,814,228
1957				
Ttl.	2,174	1,556,450	210,000	1,768,624
1959				
May	—	—	9,719	157,338
June	—	—	23,792	163,057
July	—	—	33,324	171,749
Aug.	—	—	37,534	146,907
Sept.	—	—	30,886	114,364
Oct.	—	—	29,349	117,314
Nov.	—	—	2,903	91,175
Dec.	—	—	17,294	106,525
Ttl.	—	—	188,294	1,618,446
1960				
Jan.	—	—	2,460	—
Feb.	—	—	1,064	108,652
Mar.	—	—	231	120,928
Apr.	—	—	43	121,017
May	—	—	4,919	141,861
June	—	—	5,504	140,058
July	—	—	28,493	156,573
Aug.	—	—	33,033	150,598

* Alaska totals based on mint and smelter receipts.

U. S. Silver Production* (A.B.M.S.)

	(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)		
	Dom.†	For.	Total
1954 Total	38,059	39,422	77,481
1955 Total	33,101	32,780	65,881
1956 Total	38,157	40,160	78,317
1957 Total	36,279	34,932	71,211
1958 Total	35,691	37,572	73,263
1959			
March	2,823	4,087	6,910
April	2,946	3,293	6,179
May	2,641	3,484	6,125
June	3,219	3,231	6,450
July	2,609	3,284	5,893
August	1,472	1,229	2,701
September	390	577	967
October	510	610	1,120
November	635	602	1,237
December	756	4,311	5,067
Total	23,158	32,021	55,179
1960			
January	3,327	2,830	6,157
February	3,454	3,496	6,950
March	4,010	4,259	8,269
April	3,866	4,158	8,024
May	3,425	4,018	7,443
June	3,278	3,924	7,202
July	2,817	3,799	6,616
August	3,115	4,293	7,408

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

Mine Production of Recoverable Silver in United States (U. S. Bureau of Mines)

	(In Fine Ounces)			
	Eastern States	Missouri	Western States	Alaska*
1957 Total	610,386	240,000	37,018,950	26,000
1958 Total	†	210,000	†	28,000
1959				
June	†	17,900	†	2,953
July	†	8,900	†	4,149
August	†	10,600	†	5,523
September	†	10,400	†	3,224
October	†	10,900	†	3,793
November	†	10,400	†	469
December	†	10,140	†	2,334
Total	†	169,000	†	24,134
1960				
January	†	18,300	†	321
February	†	200	†	312
March	†	100	†	17
April	†	100	†	5
May	†	100	†	627
June	†	200	†	753
July	†	200	†	4,033
August	†	200	†	4,591

† Figures not available.

* Alaska totals based on mint and smelter receipts.

Production of Primary Aluminum in the U. S. (U. S. Bureau of Mines)

	(In short tons)						
	1953	1954	1955	1956	1957	1958	1959
Jan.	89,895	116,247	128,203	140,394	147,029	139,910	156,708
Feb.	92,649	110,483	116,236	132,763	119,059	121,980	142,116
Mar.	104,460	122,339	130,272	145,895	135,706	134,019	157,189
Apr.	102,071	120,434	126,394	144,726	139,152	128,559	155,213
May	105,464	125,138	131,128	150,800	145,174	129,083	163,857
June	104,152	120,758	127,634	145,726	138,007	115,325	167,323
July	109,285	126,161	132,669	151,624	142,157	118,811	179,594
Aug.	110,545	125,296	133,551	152,406	143,449	125,416	172,817
Sept.	109,333	120,332	130,606	132,316	129,278	124,713	168,205
Oct.	108,219	125,089	134,655	149,125	133,759	139,847	173,762
Nov.	105,636	121,252	133,689	145,081	135,024	140,962	153,666
Dec.	110,291	127,056	140,748	148,391	140,033	153,301	162,996
Ttl.	1,252,013	1,460,565	1,565,721	1,679,427	1,647,710	1,655,556	1,953,019

Average Silver Prices

	(Cents per fine ounce)			
	1957	1958	1959	1960
Jan.	91.375	89.449	90.19	91.375
Feb.	91.375	88.625	90.444	91.375
Mar.	91.375	88.625	91.351	91.375
Apr.	91.375	88.625	91.375	91.375
May	91.307	88.625	91.375	91.375
June	90.456	88.625	91.375	91.375
July	90.31	88.625	91.375	91.375
Aug.	90.909	88.625	91.399	91.375
Sept.	90.602	88.673	91.399	91.375
Oct.	90.625	89.966	91.375	...
Nov.	90.382	90.125	91.375	...
Dec.	89.80	89.932	91.375	...
Aver.	90.824	89.043	91.226	...

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

U. S. Lead Imports (A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	June	July	Aug.
Ore, matte, etc. (cont.)	12,947	13,183	11,428
Canada	962	3,561	1,508
Mexico	106	44	104
Guatemala	535		
Honduras		434	520
Bolivia	385	1,326	1,179
Chile		28	79
Colombia	155		
Peru	3,381	3,976	1,916
Morocco	1,795		
Union of South Africa	5,575		4,486
Australia		3,771	1,612
Philippines	36	17	
Other countries	17	26	24
Base bullion (cont.)	250		
Other countries	250		
Pigs and bars	16,929	20,185	24,264
Canada	3,644	3,363	2,945
Mexico	6,694	4,638	8,006
Peru	4,000	200	2,196
Belgium	287		
France	2		
Germany (West)	237		
Spain		710	
Sweden	1,110		
Yugoslavia		1,314	6,672
Australia	1,192	9,723	4,445

Total Imports:

Ore, base bullion, ref.	30,126	33,368	35,692
Lead scrap, dross, etc. (cont.)	845	795	553
Antimonial lead and typemetal	179	98	459
Lead content thereof	154	76	363

U. S. Copper Scrap Exports (A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	June	July	Aug.
Copper scrap, unalloyed* (new and old)	6,156	6,842	5,996
Canada	146	149	111
Argentina	22		
Belgium	131	508	445
France	27	93	60
Germany (West)	2,620	2,980	1,929
Italy	622	357	286
Netherlands	343	258	160
Spain	271	248	954
Sweden			502
Yugoslavia		849	435
United Kingdom	778	333	191
India	152	122	91
Japan	925	847	751
Hong Kong	25		
Other countries	94	98	81
Copper-base scrap, alloyed† (new and old)	12,831	12,546	13,611
Canada	6	112	21
Mexico	2	2	188
Belgium	53	162	
France		23	
Germany (West)	2,110	1,538	1,321
Italy	1,071	1,037	1,106
Netherlands	186	1,219	337
Spain	22	28	
Switzerland		137	99
United Kingdom	2,097	73	115
India	111	195	182
Japan	7,166	7,902	10,242
Other countries	7	118	

* Ash, brass mill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.

† Copper-base alloys, including brass and bronze — Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

U. S. Copper Imports (A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	June	July	Aug.
Ore, matte and regulus (content)	8,080	8,330	4,036
Canada	1,116	968	1,238
Mexico	222	129	109
Cuba	1,209	420	
Bolivia		421	
Chile	186	2,473	1,311
Peru	922	1,853	321
Philippines	2,196	1,980	1
Union of South Africa	2,229		933
Australia		77	121
Other countries		9	2
Blister copper (content)	36,670	19,129	41,712
Mexico	1,825	1,474	2,185
Chile	20,033	11,330	28,120
Peru	14,812	5,050	10,574
Union of South Africa		1,275	833
Refined cathodes and shapes	7,464	6,818	8,975
Canada	7,353	5,793	8,668
Mexico	110	275	
Peru		694	251
Belgium		56	
Spain		1	
Rhodesia & Nyasaland			56
Crude and refined	52,214	34,277	54,723
Old and scrap (cont.)	133	164	235
Composition metal (cont.)	1	195	
Brass scrap and old (cu. cont.)	257	221	227

U. S. Copper Exports (A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	June	July	Aug.
Ore, concentrates, matte and other unrefined (content)	1,308	47	255
Refined ingots, bars, etc.*	38,757	45,020	58,720
Canada	38	59	35
Mexico	44	16	
Argentina	1,519	759	2,604
Brazil	2,656	1,532	1,336
Austria	56	3	
Belgium	756	168	672
Denmark	168	168	252
Finland	25	220	783
France	971	4,601	10,742
Germany (West)	8,719	12,336	12,474
Greece	56	280	
Italy	7,510	6,412	7,488
Netherlands	896	1,842	2,490
Norway		224	280
Portugal	111		
Sweden	307	294	622
Switzerland	419	1,061	1,398
United Kingdom	9,615	12,209	10,123
Yugoslavia			1,566
Taiwan	33		535
India	1,040	30	1,670
Japan	3,588	2,552	2,955
Australia	224	246	559
Other countries	6	8	132
Total Exports:			
Crude and refined	40,965	45,067	58,975
Pipes and tubes	39	84	47
Plates and sheets	12	112	31
Semifabricated forms	729	464	769
Wire, bars	170	407	306
Weatherproof wire†	132	208	76
Insulated copper wire	9	1	2
n.e.s. †	951	1,178	3,184

* Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.
† Gross weight; n.e.s.—not elsewhere specified.

Comparative Metal Prices

	Av. 1939	OPA Av. 1946	1960 Oct. 17
Copper, domestic	19.39	14.375	30.00
Electro., del. Val.	11.20	14.375	30.00
Lead (N. Y.)	5.05	8.25	12.00
P. W. Zinc (E. St. Louis, f.o.b.)	5.05	5.05	13.00
New York, del.			13.50
Tin Spot Straits, N. Y.			103.125
Aluminum ingot 99½%+	20.00	15.00	26.00
Antimony (R.M.M. brand f.o.b. Laredo)	12.36	14.50	29.00

U. S. Zinc Imports (A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	June	July	Aug.
Zinc ore (content)	32,696	35,689	35,632
Canada	9,746	9,212	11,508
Mexico	12,893	12,750	17,489
Guatemala	1,452	2,849	
Honduras	320		461
Bolivia	22	20	52
Colombia	5		
Chile			3
Peru	5,096	4,789	4,128
Spain	2,383		
Union of South Africa	769		
Australia		5,439	502
Philippines	2	617	835
Other countries	8	13	11
Zinc blocks, pigs, etc.	15,475	3,692	8,134
Canada	10,763	1,865	5,625
Mexico	1,392		686
Peru	1,088		170
Belgium	1,102		
Italy	165	386	496
United Kingdom	55		
Yugoslavia	221	992	716
Belgian Congo	689		441
Australia		449	
Total Imports:			
inc ore, blocks, pigs	48,171	39,381	43,766
Dross and skimmings	122	93	112
Old and worn out			16

U. S. Zinc Exports (A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	June	July	Aug.
Ore, conc. (cont.)		1	1
Slabs, blocks, etc.	4,236	2,385	7,601
Canada			1
Mexico		39	132
Cuba			55
Brazil	123	449	172
Colombia	220		265
Germany (West)	112		112
Italy			336
Netherlands	224	224	224
Sweden	224	308	700
United Kingdom	1,229	448	3,659
Philippines	282		
India	1,822	801	1,225
Other countries		116	285
Total Exports:			
Ore, conc., slabs	4,236	2,386	7,602
Scrap, ashes, dross and skimmings	974	951	2,032
Battery shells and parts, unassembled	1	1	
Rolled in sheets, plates & strips & die castings	233	212	137
Zinc and zinc alloys in crude and semifabricated forms	191	380	369
Zinc oxide	234	170	171

U. S. Lead Exports (A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	June	July	Aug.
Lead, ore, concentrates, matte and base bullion (content)	74		9
Mexico	74		9
Iran			
Pigs and bars	382	18	46
Canada	9	2	
Mexico	4	2	
Guatemala	2		33
Colombia	2		
Peru	1		4
Belgium	5		
Taiwan	352	7	
Korea		2	
Other countries	7	5	7
Total Exports:			
Ore, base bullion, ref.	456	18	55
Scrap	129	211	32
Lead plate, including battery plate, not assembled as complete battery units	3	2	1
Babbitt metal	8	3	3
Lead and lead base alloys in semifabricated forms	32	38	15

World Production of Copper

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States	Canada	Mexico (crude)	Chile	Peru	Fed. Rep. of Germany	Norway	United Kingdom	Yugoslavia	India	Japan	Turkey	Australia	Northern Rhodesia	Union of South Africa
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
1955															
Total	1,036,702	326,599	61,583	447,288	35,478	286,905	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
1956															
Total	1,133,134	356,251	69,918	506,251	35,005	279,461	16,457	127,365	32,390	8,827	139,062	27,101	55,711	435,186	47,914
1957															
Total	1,115,483	360,745	42,905	....	46,141	255,710	17,265	121,799	37,186	9,298	143,654	27,101	55,633	499,418	47,828
1958															
Total	1,881,170	346,816	68,386	462,064	42,750	295,312	19,529	106,134	37,116	9,062	136,612	24,676	72,361	426,513	53,090
1959															
April	98,376	32,130	5,201	42,715	4,250	26,859	1,870	11,259	3,593	763	17,938	2,330	7,419	48,150	4,528
May	104,236	32,622	5,275	46,083	3,770	25,358	1,771	7,693	3,503	764	18,516	2,480	6,408	53,067	4,676
June	99,419	36,979	5,847	46,901	3,357	24,635	1,743	10,909	3,231	776	18,621	2,362	8,133	53,895	4,766
July	81,662	36,067	5,755	45,508	3,676	25,890	1,639	7,108	3,369	781	18,957	1,846	5,346	48,806	4,541
Aug.	51,327	35,045	5,326	50,093	2,533	24,716	1,677	6,610	1,810	774	18,805	2,378	5,798	50,285	4,357
Sept.	104,272	35,892	4,300	44,439	8,782	25,357	1,986	10,435	3,619	799	18,837	2,427	7,111	48,753	3,742
Oct.	20,931	35,980	4,068	36,449	3,061	27,840	1,800	8,561	3,137	804	18,898	2,304	....	49,519	3,025
Nov.	18,351	35,271	4,886	50,877	2,904	25,258	1,495	10,076	3,451	802	17,186	2,923	....	49,232	5,005
Dec.	26,686	34,416	4,872	53,186	3,438	28,143	2,085	8,736	2,403	421	20,498	....	....	48,350	5,244
1960															
Jan.	64,098	36,404	4,326	47,550	2,901	27,222	1,941	7,489	3,310	769	21,096	....	4,702	56,495	5,061
Feb.	85,899	35,824	4,817	43,380	3,579	25,288	1,954	8,719	3,013	831	....	....	6,915	47,322	3,017
Mar.	107,895	38,341	5,376	49,124	15,956	30,836	2,008	8,453	3,617	913	22,968	2,723	6,310	52,332	4,292
Apr.	104,895	34,289	4,672	50,010	16,501	26,915	1,905	9,640	3,177	808	21,563	2,480	....	54,595	4,738
May	104,272	35,892	4,300	39,580	16,198	29,897	2,038	12,379	3,375	838	18,077	....	....	55,596	4,706
June	95,522	37,016	5,061	43,826	13,259	23,011	....	11,720	....	890	23,314	....	....	54,616	....
July	91,238	34,425	4,515	50,251	14,544	27,869	....	7,844	....	818	23,498	....	....	54,982	....
Aug.	84,571	36,789	4,737	....	12,544	....	....	....	....	....	23,385	....	....	56,063	....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake." Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. * Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugoslavia	Japan	Australia (a)	French Morocco	Tunisia	Rhodesia	Total
1955																
Total	547,153	148,811	221,138	67,303	91,241	73,251	162,508	46,806	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,125
1956																
Total	613,293	147,865	213,524	61,917	111,479	73,251	178,713	42,780	64,824	83,507	51,019	256,300	30,993	26,623	17,024	1,984,344
1957																
Total	604,533	142,935	218,266	55,971	....	94,509	195,136	42,336	61,332	85,313	59,670	261,035	34,442	27,069	12,364	2,041,530
1958																
Total	575,612	130,886	246,443	80,999	119,192	111,337	223,973	60,860	77,490	92,903	52,915	271,654	42,266	32,359	16,492	1,955,763
1959																
April	40,606	13,655	16,621	4,438	8,038	5,541	17,141	4,942	6,491	6,876	6,615	23,919	2,726	2,155	1,344	162,611
May	39,101	13,357	16,934	6,606	8,797	7,363	17,725	3,614	7,435	8,369	6,347	23,499	2,050	1,784	1,344	165,602
June	37,459	12,997	20,000	6,540	9,125	7,876	18,128	2,653	6,510	7,854	6,340	25,151	1,552	926	1,344	164,815
July	32,882	8,096	17,099	6,401	8,734	6,065	16,381	4,384	6,074	2,221	5,303	19,125	2,859	1,749	1,344	139,291
Aug.	25,589	7,357	19,086	4,267	7,547	6,581	15,256	3,354	6,049	8,645	5,344	21,168	862	2,863	1,344	136,725
Sept.	14,801	9,775	14,320	4,354	7,217	6,184	17,773	4,502	4,728	8,731	5,322	22,786	3,567	2,352	1,344	128,850
Oct.	18,892	9,897	17,988	6,093	7,107	6,004	18,070	4,310	6,193	....	4,663	24,226	3,466	2,669	1,344	....
Nov.	18,796	9,674	18,223	6,199	7,766	6,431	17,820	4,310	6,193	8,273	4,594	24,226	3,466	2,669	1,344	141,370
Dec.	30,160	10,071	16,448	5,826	7,708	6,581	19,726	4,688	6,639	11,893	6,865	23,448	3,869	2,066	1,344	....
1960																
Jan.	40,043	11,664	15,821	6,127	8,450	6,818	19,424	3,128	7,284	6,896	6,699	26,233	2,448	....	1,309	163,457
Feb.	36,435	12,469	17,371	6,063	8,746	6,276	17,907	4,260	6,468	7,167	....	24,964	2,267	1,047	1,316	....
Mar.	37,192	13,967	13,687	7,154	9,561	8,500	19,743	3,716	6,249	7,804	7,034	19,307	2,916	1,774	1,348	161,625
Apr.	40,177	13,261	17,715	6,945	9,357	9,716	19,202	6,367	6,886	6,382	6,607	19,663	3,053	2,663	1,347	168,049
May	36,509	13,467	18,736	6,905	9,406	9,370	20,299	4,074	....	6,865	6,086	22,065	3,103	1,241	1,354	....
June	33,448	....	14,320	6,695	8,247	8,343	16,372	3,387	....	....	....	....	....	2,423	1,813	1,355
July	29,270	....	15,523	7,000	6,897	8,818	17,036	4,029	....	....	7,177	....	....	3,835	2,922	....
Aug.	32,623	....	16,639	6,008	....	2,205	....	....	....	....	6,666	....	....	1,463	887	....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Can. (b)	Mexico	Peru	Belgium	France	(In Tons of 2,000 Pounds) Fed. Rep. of Germany	Great Britain	Italy	Nether-lands	Norway	Spain	Yugo- slavia	Japan (a)	Austra- lia (b)	Rha- ndia (b)	Total (d)
1955																	
Total	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,202	49,724	26,244	15,175	122,965	113,221	31,248	2,534,457
1956																	
Total	1,062,954	255,601	62,136	10,428	251,906	124,105	204,961	90,784	80,407	32,123	53,170	25,224	15,434	153,821	117,445	32,396	2,630,383
1957																	
Total	1,574,500	247,356	62,354	35,772	259,701	148,455	202,627	85,348	81,179	32,786	52,787	24,279	30,256	152,145	123,587	33,040	2,691,699
1958																	
Total	892,607	254,661	18,354	34,685	257,540	177,422	210,408	80,494	5,955	2,841	54,423	26,750	34,446	166,883	128,548	39,508	2,464,639
1959																	
Mar.	79,918	22,135	5,439	2,363	20,215	14,230	17,325	7,797	6,801	2,921	4,917	2,369	3,014	13,217	10,759	2,800	221,316
Apr.	76,393	21,512	5,225	2,502	20,408	14,087	16,426	6,030	7,039	2,816	3,621	2,239	2,509	15,645	10,472	2,716	216,377
May	77,489	21,167	5,108	2,545	21,181	13,902	16,633	6,595	7,790	2,823	4,798	2,273	2,701	16,171	11,137	2,744	226,057
June	75,544	21,250	4,776	2,524	21,004	14,120	16,185	8,271	7,164	2,899	4,759	2,180	2,083	15,873	10,899	2,716	218,131
July	73,101	21,055	5,038	2,634	20,100	14,262	16,325	6,112	7,303	2,917	4,539	2,057	3,796	15,233	11,189	2,856	215,525
Aug.	69,768	21,588	4,965	2,504	19,472	14,138	16,585	6,507	7,370	2,968	4,646	2,198	3,355	15,308	11,298	2,812	211,964
Sept.	69,293	20,744	4,985	2,537	19,387	11,883	16,366	7,892	6,819	2,928	4,708	2,208	3,013	15,133	10,985	2,800	199,560
Oct.	63,938	21,744	5,084	2,545	20,512	12,228	17,064	6,557	6,403	2,967	3,570	2,245	.....	.....	10,904	2,800	.....
Nov.	62,346	21,039	5,072	2,608	21,180	12,251	16,683	6,203	6,403	2,967	3,570	2,245	4,990	13,634	10,904	2,800	199,319
Dec.	69,666	21,963	5,330	2,578	21,810	12,807	17,336	7,772	6,519	3,201	3,074	2,331	.....	15,141	11,305	2,906	.....
1960																	
Jan.	73,326	22,426	5,278	2,608	21,957	12,675	17,409	7,250	6,781	2,786	4,743	2,402	3,178	16,498	11,023	2,707	220,588
Feb.	74,738	21,055	4,627	2,660	22,059	13,331	16,501	5,761	6,774	2,957	4,299	2,213	3,180	.....	10,357	2,664	.....
Mar.	86,028	22,649	5,297	2,841	22,406	14,424	17,663	7,868	7,794	3,462	4,388	2,242	3,392	16,307	11,137	2,894	.....
Apr.	83,221	21,391	4,662	2,760	22,608	14,235	16,883	6,860	7,173	3,112	4,421	2,146	3,100	16,188	10,874	2,800	.....
May	79,216	21,701	4,972	3,051	23,278	14,071	17,147	5,137	8,038	3,361	6,638	.....	3,190	12,988	11,238	2,897	.....
June	76,728	21,291	4,554	2,951	23,024	13,837	15,984	6,786	7,507	3,454	3,988	.....	.....	16,684	10,288	2,803	.....
July	73,754	20,860	5,080	3,068	23,094	14,148	16,892	6,574	7,629	3,390	2,390	.....	.....	.....	17,355	.....	.....
Aug.	63,636	21,203	4,983	3,140	.....	13,427	.....	.....	.....	.....	3,815	.....	.....	.....	17,417	.....	.....

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)				
Virgin Zinc		Zinc Conc.		
At start	1959	1960	1959	1960
of:				
Jan.	34,166	37,162	56,371	45,885
Feb.	34,805	48,337	58,518	41,547
Mar.	36,850	48,689	57,897	39,546
Apr.	38,457	51,064	52,151	44,250
May	38,643	54,491	47,936	47,486
June	37,713	52,470	41,954	47,595
July	38,297	52,004	45,640	54,044
Aug.	37,427	55,362	43,948	58,587
Sept.	40,358	....	42,385	....
Oct.	40,995	....	39,233	....
Nov.	35,994	....	38,948	....
Dec.	35,460	....	47,131	....

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)			
	June	July	Aug.
(Gross Weight)			
Zinc ore and concentrates	29,069	27,348	13,528
Zinc conc.*	14,778	11,479	†
Australia	8,889	10,470	....
Canada	3,817	26	....
Peru	586	590	....
Burma	1,291	357	....
Other countries	195	36	....
Zinc and zinc alloys	15,850	12,642	11,410
Australia	350	1,149	....
Canada	5,350	7,757	6,566
Belgium	1,228	1,234	1,208
Germany (W.)	....	3	....
Netherlands	100	....	96
Soviet Union	1,113	25	280
United States	2,951	1,074	711
Belgian Congo	2,525	....	1,450
Poland	685	100	100
Other countries	1,548	1,300	999

* British Bureau of Non-Ferrous Metal Statistics. The estimated zinc content is not the content of the gross weight as officially reported for any comparable period.
† Not available.

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)			
	June	July	Aug.
Copper unwrought			
—ingots blocks, slabs, bars, etc.	4,633	3,242	4,424
Plates, sheets, rods, etc.	5,984	5,181	1,249
Wire (including uninsulated electric wire)	185	142	154
Tubes	665	705	934
Other copper worked including pipe fittings)	69	73	54
Total	11,536	9,343	6,815

METALS, OCTOBER, 1960

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)					
	Unalloyed	Alloyed*	Total	Virgin	Scrap
1956 Total	388,167	251,312	639,479	500,794	138,685
1957 Total	407,326	234,158	641,484	507,493	133,991
1958 Total	442,977	225,007	667,978	534,619	133,359
1959					
April	32,742	22,782	55,525	43,015	12,509
May	28,421	19,199	47,620	33,367	14,253
June	35,009	21,103	56,112	44,761	11,351
July	24,714	19,858	44,572	32,034	12,538
August	24,524	16,097	40,621	30,866	9,755
September	35,447	21,920	57,367	45,178	12,189
October	37,221	23,880	61,101	47,345	13,756
November	37,463	23,392	60,855	47,031	13,824
December	36,044	23,202	59,246	44,753	14,493
Total	382,295	250,871	633,166	478,819	154,347
1960					
January	33,888	23,428	57,316	41,741	15,575
February	37,662	23,925	61,587	48,824	12,763
March	41,306	26,676	67,982	54,389	13,593
April	35,153	23,525	58,678	41,147	17,531
May	38,621	25,038	63,659	46,406	17,253
June	40,612	24,786	65,398	54,830	10,568
July	26,294	20,012	46,306	33,294	13,012

* Includes copper sulphate effective October, 1954.

U. K. Virgin Copper Stocks

(In long tons)

(British Bureau of Non-Ferrous Metal Statistics)			
	1958	1959	1960
At start of			
Jan.	91,477	64,184	55,005
Feb.	82,483	65,941	61,008
Mar.	89,147	65,875	55,979
Apr.	94,330	72,946	51,137
May	88,582	72,318	59,404
June	88,913	78,505	77,808
July	81,851	80,477	71,391
Aug.	84,756	81,986	98,083
Sept.	89,899	89,483	....
Oct.	85,092	77,803	....
Nov.	74,696	64,602	....
Dec.	69,023	60,936	....

U. K. Refined Lead Stocks

(British Bureau of Non-Ferrous Metal Statistics)

(In long tons)			
	1958	1959	1960
At start of			
Jan.	51,296	45,444	48,035
Feb.	49,134	48,102	44,290
Mar.	47,738	40,535	42,043
Apr.	40,547	53,289	41,248
May	37,509	62,286	50,363
June	34,608	63,135	45,657
July	40,518	57,810	46,542
Aug.	37,148	67,586	53,069
Sept.	43,758	66,048	....
Oct.	48,856	63,121	....
Nov.	40,216	56,697	....
Dec.	35,335	46,984	....

Zinc Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	1960	1960	1960
	May	June	July
IMPORTS			
U. S. (s.t.)	6,820	15,475	3,692
Canada (s.t.)	10	....	....
Belgium	264	....	....
Denmark	866	1,530	849
France	2,630	2,347	1,979
Germany, W.*	11,348	15,377	....
Italy	1,624	....	....
Netherlands	1,138	609	....
Sweden	2,289	....	....
Switzerland*	1,317	2,915	2,385
U. K. (l.t.)	13,018	15,850	12,642
India† (l.t.)	6,478	4,972	....
EXPORTS			
U. S. (s.t.)	7,066	4,236	2,386
Canada (s.t.)	13,440	22,409	11,433
Belgium	10,563	....	....
Denmark	101	409	300
France	371	465	546
Germany, W.*	2,233	1,887	....
Italy	843	....	....
Netherlands	1,265	1,530	....
Norway	3,033	....	....
Switzerland*	....	4	10
U. K.† (l.t.)	605	1,435	726
Northern			
Rhodesia† (l.t.)	2,977	3,199	2,448
Australia (l.t.)	3,317	....	....
Belgian Congo	N.A.	....	....

* Includes scrap. † Includes manufacturers.
† British Bureau of Non-Ferrous Metal Statistics.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

Tin Content of Tin in Ore		Tin Metal	
Imports	Production*	Imports	Production*
1957 Total	39,272	9,834	34,175
1958 Total	27,419	13,196	32,551
1959			
August	1,970	58	1,704
September	2,990	115	2,132
October	2,259	108	1,851
November	3,936	90	3,317
December	2,161	117	2,941
Total	25,812	1,252	....
1960			
January	1,490	117	1,845
February	2,417	105	2,095
March	2,294	98	2,316
April	1,532	90	2,216
May	1,785	21	1,496
June	2,255	21	1,345
July	1,840	18	1,202
August	1,970	58	1,704
September	2,990	115	2,132
October	2,259	108	1,851
November	3,936	90	3,317
December	2,161	117	2,941
Total	25,812	1,252	....
1960			
January	1,490	117	1,845
February	2,417	105	2,095
March	2,294	98	2,316
April	1,532	90	2,216
May	1,785	21	1,496
June	2,255	21	1,345
July	1,840	18	1,202
August	1,970	58	1,704
September	2,990	115	2,132
October	2,259	108	1,851
November	3,936	90	3,317
December	2,161	117	2,941
Total	25,812	1,252	....

* As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

(Primary Copper)

(In Tons)

	1957	1958	1959	1960
Jan. . .	25,469	32,868	24,664	36,404
Feb. . .	21,861	28,668	28,016	35,824
Mar. . .	27,663	29,239	32,427	38,341
Apr. . .	27,398	30,635	32,130	34,290
May . .	29,086	32,471	32,622	36,892
June . .	24,093	32,418	36,979	37,025
July . .	27,195	31,131	36,067	37,961
Aug. . .	26,943	30,867	35,045	...
Sept. .	24,633	27,546	35,740	...
Oct. . .	30,312	22,572	35,980	...
Nov. . .	27,331	20,368	35,271	...
Dec. . .	31,604	19,033	34,416	...
Year . .	323,588	346,816	399,362	...

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)

(In Tons)

	1957	1958	1959	1960
Jan. . .	8,946	4,752	5,034	5,549
Feb. . .	6,633	1,553	6,377	6,692
Mar. . .	7,044	9,497	11,831	11,216
Apr. . .	7,314	7,450	7,836	5,407
May . .	9,676	7,764	12,230	6,979
June . .	7,210	4,036	15,610	9,521
July . .	4,682	12,629	3,478	7,955
Aug. . .	6,416	7,232	4,023	...
Sept. .	8,467	5,125	3,895	...
Oct. . .	7,761	10,320	4,885	...
Nov. . .	6,175	10,641	6,785	...
Dec. . .	4,217	11,352	10,218	...
Year . .	84,541	92,351	92,252	...

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)

Fine Ounces)

	1958	1959	1960
Jan. . .	634,715	185,367	887,242
Feb. . .	208,149	329,742	1,312,006
Mar. . .	350,827	425,973	740,465
Apr. . .	284,971	989,593	809,500
May . .	376,082	564,017	491,805
June . .	438,253	871,570	545,610
July . .	529,770	728,598	752,373
Aug. . .	279,511	688,042	...
Sept. .	583,570	763,017	...
Oct. . .	323,475	767,939	...
Nov. . .	217,892	70,205	...
Dec. . .	871,573	430,802	...
Year . .	5,098,788	6,210,175	...

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)

(In Tons)

	1957	1958	1959	1960
Jan. . .	20,582	26,883	10,620	29,046
Feb. . .	16,272	16,816	10,304	22,295
Mar. . .	14,270	18,662	11,025	20,338
Apr. . .	16,417	23,261	17,079	21,135
May . .	19,048	19,358	21,739	20,767
June . .	10,826	20,831	21,310	24,832
July . .	18,621	21,703	13,650	22,242
Aug. . .	21,980	15,881	15,155	...
Sept. .	14,314	15,373	21,077	...
Oct. . .	13,110	20,341	19,977	...
Nov. . .	16,622	14,391	23,172	...
Dec. . .	16,282	11,138	20,542	...
Year . .	198,794	224,638	198,010	...

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)

(In Tons)

	1957	1958	1959	1960
Jan. . .	20,340	21,801	21,456	22,247
Feb. . .	19,808	19,743	19,709	21,055
Mar. . .	21,941	22,314	22,135	22,549
Apr. . .	20,504	20,986	21,512	21,391
May . .	20,564	21,269	21,147	21,701
June . .	19,928	20,353	21,250	21,294
July . .	20,061	20,873	21,055	20,860
Aug. . .	20,305	21,152	21,588	...
Sept. .	20,247	20,530	20,744	...
Oct. . .	20,892	21,125	21,744	...
Nov. . .	20,933	20,273	21,039	...
Dec. . .	21,823	21,705	21,963	...
Year . .	247,351	252,157	255,342	...

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)

	1958	1959	1960
Jan. . .	2,529,583	3,094,440	2,755,069
Feb. . .	2,294,655	2,264,903	2,864,074
Mar. . .	2,448,698	2,782,307	2,734,245
Apr. . .	2,558,958	2,691,503	2,582,463
May . .	2,650,665	2,499,149	2,348,469
June . .	2,527,632	2,676,937	2,965,690
July . .	2,385,687	2,867,957	2,928,107
Aug. . .	2,884,154	2,519,033	...
Sept. .	2,856,304	2,446,846	...
Oct. . .	2,390,027	3,072,219	...
Nov. . .	2,643,790	2,333,137	...
Dec. . .	2,917,528	2,678,623	...
Year . .	31,087,681	31,927,054	...

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*

(In Tons)

	1957	1958	1959	1960
Jan. . .	14,032	17,117	17,118	16,284
Feb. . .	15,170	14,908	15,923	16,397
Mar. . .	16,940	15,421	17,389	16,887
Apr. . .	14,275	15,644	16,237	16,266
May . .	14,591	15,131	16,813	16,558
June . .	16,431	15,645	14,968	17,534
July . .	14,377	14,076	15,111	18,066
Aug. . .	14,679	12,260	14,104	...
Sept. .	15,869	15,401	12,420	...
Oct. . .	14,151	14,564	13,958	...
Nov. . .	15,879	16,680	13,024	...
Dec. . .	15,296	18,248	14,545	...
Year . .	171,690	185,095	181,610	...

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Ore in Tons)

	1957	1958	1959	1960
Jan. . .	19,304	17,349	13,565	18,445
Feb. . .	16,618	8,376	12,675	12,995
Mar. . .	14,923	19,636	14,617	14,055
Apr. . .	17,131	16,346	12,789	13,344
May . .	16,680	15,121	11,049	12,460
June . .	16,157	7,776	20,298	10,113
July . .	12,912	27,394	23,122	18,540
Aug. . .	20,520	15,906	18,464	...
Sept. .	17,671	8,670	14,367	...
Oct. . .	16,735	22,810	12,518	...
Nov. . .	17,225	17,978	16,577	...
Dec. . .	16,131	18,344	11,043	...
Year . .	202,007	195,707	181,084	...

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)

	1957	1958	1959	1960
Jan. . .	16,609	16,710	8,047	17,399
Feb. . .	15,027	15,896	12,616	16,435
Mar. . .	16,733	15,853	14,922	17,780
Apr. . .	15,347	15,163	15,493	17,524
May . .	16,225	15,231	16,622	17,207
June . .	15,447	14,603	16,599	18,382
July . .	15,878	12,851	16,199	17,821
Aug. . .	16,756	12,597	16,784	...
Sept. .	15,604	11,786	16,205	...
Oct. . .	15,628	3,682	17,212	...
Nov. . .	14,587	3,178	16,904	...
Dec. . .	15,096	3,298	18,738	...
Year . .	188,962	140,842	186,341	...

Canadian Copper Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1960		
	June	July	Aug.
Ore, matte, regulus, etc. (content)	3,142	2,689	3,778
United States	699	1,378	779
Belgium . . . . .	...	...	158
Germany (W.) . . . . .	...	...	158
Norway	2,014	1,209	2,441
U. Kingdom	161	102	242
Japan	268	...	...
Ingots, bars, billets, anodes	24,831	22,242	30,356
United States	7,670	5,169	9,290
Belgium	280	...	667
France	280	841	1,966
Finland . . . . .	...	280	...
Germany (W.)	644	1,316	3,696
Italy	112	504	112
Netherlands	644	28	1,456
Portugal . . . . .	...	224	...
Sweden	112	450	224
Switzerland	112	...	...
U. Kingdom	12,335	11,767	10,441
Australia	280	...	224
India	2,361	1,663	1,831
Japan . . . . .	...	...	168
Other countries	1	...	1
Yugoslavia . . . . .	...	...	280
Total Exports:			
Crude & refined	27,973	24,931	34,134
Old and scrap	1,154	1,555	1,496
Rods, strips, sheet & tubing	1,722	2,089	1,222

Canadian Zinc Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1960		
	June	July	Aug.
Ore (zinc content)	10,113	18,540	23,076
United States	10,113	9,762	17,021
Belgium . . . . .	...	76	3,047
France . . . . .	...	...	3,008
Norway . . . . .	...	4,349	...
U. Kingdom . . . . .	...	4,353	...
Slab zinc	22,409	11,433	15,730
United States	10,075	2,356	5,822
Brazil	172	580	...
Denmark	336	...	...
Germany (W.) . . . . .	...	336	336
Netherlands	56	...	224
U. Kingdom	8,390	6,693	6,454
Korea	51	219	11
Hong Kong . . . . .	...	...	248
Philippines . . . . .	...	355	1,433
Taiwan	99	...	...
India	2,921	524	593
Japan . . . . .	...	15	...
Thailand	309	355	385
Belgium . . . . .	...	...	224
Total Exports:			
Ore and slabs	32,522	29,973	38,806
Zinc scrap, dross, ashes	727	432	570
United States	171	47	112
Belgium	189	243	137
Germany (W.)	138	...	66
Netherlands	142	76	...
U. Kingdom . . . . .	...	...	188
Japan	87	66	67

Canadian Lead Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1960		
	June	July	Aug.
Ore (lead content)	1,599	3,505	9,979
United States	1,599	2,677	2,075
Belgium . . . . .	...	828	3,950
Germany (W.) . . . . .	...	...	3,954
Refined lead	9,521	7,955	9,080
United States	3,396	3,961	3,295
U. Kingdom	5,596	3,217	3,609
Japan	456	642	1,823
Taiwan . . . . .	...	22	187
Thailand . . . . .	...	...	132
India	56	91	...
Other countries	17	22	34
Total Exports:			
Ore & refined	11,120	11,460	19,059
Lead scrap	802	1,015	704

Copper Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted.

	1960		
	May	June	July
IMPORTS			
U. S. (blister, s.t.)	16,180	36,670	19,129
(ore, etc., s.t.)	6,314	8,080	8,330
(ref., s.t.)	7,152	7,464	6,818
Belgium*	17,346	...	...
Denmark	215	420	21
France (crude) . . . . .	...	813	...
(refined)	19,201	14,758	16,976
Italy	12,852	...	...
Germany, W.	38,824	42,202	...
Netherlands	2,360	2,660	...
Norway	312	...	...
Sweden	4,010	...	...
Switzerland	2,251	3,435	2,568
U. K. (l.t.)	59,090	45,676	56,443
India (blister/-ref., l.t.)†	3,953	3,284	...
Australia (blister & ref., l.t.) . . . . .	...	200	...
EXPORTS			
U. S. (ore and unref., s.t.)	278	1,308	47
(ref., s.t.)	50,753	38,757	45,020
Canada . . . . .	...	...	...
(ref., s.t.)	20,767	24,831	...
Belgium*	14,212	...	...
Finland†	568	...	...
Germany, W.	3,696	6,499	...
Norway	1,776	...	...
Sweden	691	...	...
U. K. (l.t.)	2,953	4,633	3,242
Turkey*	3,330	...	...
N. Rhodesia (blister & ref., l.t.)‡	46,151	49,204	47,801

* Includes alloys.

† Includes old.

‡ British Bureau of Non-Ferrous Metal Statistics.

†† Copper wire bars and ingot bars 99% and copper ingots 97%.

Canada's Nickel Exports

(Dominion Bureau of Statistics)

(Refined, in oxide, matte, etc.)

	1960			
	1957	1958	1959	1960
Jan.	14,260	14,233	6,757	21,443
Feb.	9,974	12,157	7,976	14,680
Mar.	14,958	12,316	14,006	19,072
Apr.	18,671	20,962	14,213	13,892
May	19,351	20,574	16,142	14,351
June	14,539	16,144	15,901	15,719
July	14,181	14,055	11,985	...
Aug.	14,966	13,012	13,664	...
Sept.	14,160	14,371	19,143	...
Oct.	13,370	8,335	...	...
Nov.	16,620	3,001	...	...
Dec.	14,606	5,060	...	...
Year	178,656	154,220	...	...

French Zinc Imports

(A. B. M. S.)

(In metric tons)

	1960		
	June	July	Aug.
Ore (gross weight)	28,390	25,160	26,385
Canada . . . . .	...	5,000	...
Peru . . . . .	...	...	3,008
Belgium	779	1,603	1,954
Finland	1,706	...	2,000
Greece	1,177	...	1,232
Italy	3,123	...	7,651
Norway . . . . .	...	...	1,568
Spain	4,940	4,414	675
Algeria	6,396	4,991	4,147
Morocco	7,443	6,632	4,150
Belgian Congo	2,758	2,520	...
Burma	68	...	...
Slabs, bars, blocks, etc.	2,347	1,979	1,412
Peru	51	...	...
Belgium	1,940	1,195	860
Germany (W.)	30	...	20
Italy	51	51	...
Netherlands	266	...	532
Russia . . . . .	...	633	...
Algeria	9	...	...
Spain . . . . .	...	100	...

French Copper Imports

(A. B. M. S.)

(In metric tons)

	1960		
	June	July	Aug.
Crude copper for refining (blister, black and cement)	813	...	1,649
Belgian Congo	813	...	1,090
Rhodesia & Nyasaland . . . . .	...	...	559
Refined	14,758	16,976	21,582
United States	2,383	6,181	4,933
Canada	1,525	1,131	1,531
Chile	1,300	250	3,254
Belgium	4,379	5,875	7,286
Germany (W.)	319	334	252
Norway . . . . .	...	76	...
Sweden	5	4	85
Belgian Congo	2,255	1,065	1,962
Rhodesia-Nyasaland	2,522	2,060	2,152
Other countries	70	...	127

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1960		
	June	July	Aug.
(Gross Weight)			
Copper and copper alloys	45,676	56,443	50,182
U. of S. Africa	200	300	360
Rhodesia-Nyasaland	18,114	23,275	22,550
Canada	9,169	9,740	10,415
Belgium	127	2	251
Germany (W.)	31	1,077	86
Norway	300	201	201
United States	7,635	9,630	8,562
Chile	9,084	11,540	7,399
Peru	534	170	125
Belgian Congo	250	250	...
Other countries	232	258	233
Of which:			
Electrolytic	29,777	37,704	38,892
Other refined	4,550	6,253	2,782
Blister or wrought	10,980	11,690	8,155
Wrought and alloys	369	796	353
Total	45,676	56,443	50,182

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL
(Bureau of Census — Thousands of Pounds)

	Alu- minum	Copper	Mag- nesium	Zinc	Lead Die
1954 Total	607,764	834,557	25,572	474,741	18,396
1955 Total	833,058	1,011,748	27,892	781,254	21,045
1956 Total	801,136	966,473	36,168	88,069	20,734
1957 Total	751,856	875,389	30,322	663,330	23,791
1958 Total	596,816	739,915	27,228	508,297	18,920
1959					
March	73,351	78,641	2,129	57,600	1,765
April	72,976	82,799	2,455	57,325	1,862
May	68,268	78,413	2,370	60,656	2,025
June	66,471	79,730	2,464	56,128	2,007
July	56,911	67,073	2,265	46,756	1,858
August	55,904	68,979	2,243	46,566	1,898
September	66,193	76,045	2,263	58,144	2,218
October	67,499	79,832	2,436	59,214	2,068
November	54,557	70,674	2,023	46,270	1,755
December	64,939	73,558	2,163	60,652	1,346
Total	790,520	892,027	27,144	651,437	21,658
1960					
January	68,247	73,971	2,135	61,357	1,496
February	71,699	71,797	2,075	62,925	1,628
March	72,216	75,908	1,903	60,816	1,994
April	61,797	66,777	1,926	47,553	2,030
May	60,330	66,299	1,953	50,844	1,935
June	60,068	64,585	2,050	50,809	2,009
July	45,669	48,471	1,638	35,117	1,488

Spot Straits Tin

(Straits, Open Market, N. Y.)

	Monthly Average Prices			
	1957	1958	1959	1960
Jan.	101.511	92.94	99.411	99.863
Feb.	101.132	93.915	102.785	101.178
Mar.	99.643	94.452	103.042	100.228
Apr.	99.304	93.988	102.505	99.25
May	93.347	94.512	103.125	99.554
June	98.05	94.708	104.25	101.377
July	96.52	94.898	102.337	103.588
Aug.	94.261	94.988	102.333	102.864
Sept.	93.406	94.101	102.44	102.381
Oct.	91.838	96.523	102.238	...
Nov.	89.236	99.118	101.021	...
Dec.	92.35	98.989	99.176	...
Aver.	96.301	95.177	102.055	...

Copper Castings Shipments

BY TYPE OF CASTING
(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Mold	Die	All Other
1952 Total	1,009,910	910,862	63,865	2,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954 Total	834,557	751,804	48,440	6,480	27,794
1955 Total	1,011,748	907,852	63,041	8,541	31,408
1956 Total	966,113	866,404	57,522	10,023	32,134
1957 Total	875,389	789,819	44,746	10,776	30,048
1958					
December	67,905	61,119	3,535	1,059	2,192
Total	739,985	667,255	36,529	10,201	22,681
1959					
February	66,589	62,593	3,557	1,176	2,263
March	78,641	69,472	4,333	1,361	3,475
April	82,799	73,567	4,640	1,328	3,264
May	78,413	69,351	4,363	1,291	3,408
June	79,730	70,836	4,421	1,175	3,298
July	69,073	61,650	3,669	946	2,608
August	68,979	60,346	4,410	993	3,230
September	76,045	66,517	4,810	1,138	3,580
October	79,832	69,583	5,172	1,169	3,908
November	70,674	61,490	4,893	1,160	3,131
December	73,558	64,579	4,337	1,130	3,512
Total	891,216	790,290	52,377	14,083	36,907
1960					
January	73,971	65,742	3,915	1,371	2,943
February	71,797	63,105	4,146	1,282	3,266
March	75,908	66,517	4,346	1,381	3,664
April	66,777	58,453	4,523	1,162	2,639
May	66,299	57,848	4,463	1,153	2,835
June	64,485	56,441	3,715	1,180	3,249
July	48,471	42,778	2,910	929	1,854

Nickel Averages

Electro, cathode sheets, 99.00%,
f.o.b. refinery, duty included
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	74.00	74.00	74.00	74.00
Feb.	74.00	74.00	74.00	74.00
Mar.	74.00	74.00	74.00	74.00
Apr.	74.00	74.00	74.00	74.00
May	74.00	74.00	74.00	74.00
June	74.00	74.00	74.00	74.00
July	74.00	74.00	74.00	74.00
Aug.	74.00	74.00	74.00	74.00
Sept.	74.00	74.00	74.00	74.00
Oct.	74.00	74.00	74.00	...
Nov.	74.00	74.00	74.00	...
Dec.	74.00	74.00	74.00	...
Aver.	74.00	74.00	74.00	...

Platinum Averages

N. Y. MONTHLY QUOTATIONS
(Dollars per Troy Ounce)

	1957	1958	1959	1960
Jan.	101.92	77.85	52.57	80.00
Feb.	98.59	74.82	59.25	83.29
Mar.	93.50	72.096	77.10	83.00
Apr.	93.45	70.72	77.18	83.00
May	92.865	67.34	77.50	83.00
June	92.02	66.18	77.50	83.00
July	90.265	64.35	78.00	83.00
Aug.	84.426	60.94	78.00	83.00
Sept.	84.00	59.50	78.00	83.00
Oct.	84.00	57.327	78.00	...
Nov.	83.80	56.41	78.44	...
Dec.	78.70	53.154	78.50	...
Aver.	89.79	65.07	74.17	...

Prompt Tin Prices

(Straits, Open Market, N. Y.)

	Monthly Average Prices (Cents Per Pound)			
	1957	1958	1959	1960
Jan.	101.347	92.653	99.351	99.863
Feb.	100.257	93.763	102.708	100.987
Mar.	99.476	94.363	103.042	100.098
Apr.	99.288	92.988	102.505	99.25
May	98.335	94.512	103.107	99.548
June	98.025	94.619	104.142	101.318
July	96.44	94.892	102.337	103.525
Aug.	94.159	94.976	102.345	102.853
Sept.	93.313	94.054	102.435	102.256
Oct.	91.848	96.455	102.238	...
Nov.	89.236	98.985	100.972	...
Dec.	92.34	98.96	99.176	...
Aver.	93.672	95.069	102.03	...

Quicksilver Averages

N. Y. Monthly Averages
Virgin, Dollars per 76-lb Flask

	1957	1958	1959	1960
Jan.	256.00	224.35	219.50	211.30
Feb.	256.00	229.39	219.50	212.68
Mar.	256.00	232.096	223.57	214.00
Apr.	256.00	233.06	239.52	214.00
May	256.00	229.48	245.86	214.00
June	256.00	229.00	241.64	212.00
July	256.00	230.25	236.74	210.00
Aug.	252.20	240.27	232.524	209.74
Sept.	248.58	241.12	225.429	209.00
Oct.	234.48	235.94	224.543	...
Nov.	228.33	230.05	217.944	...
Dec.	226.50	223.54	215.05	...
Aver.	248.51	230.96	228.49	...

METALS, OCTOBER, 1960

Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)					
	Stocks beginning of month short tons	Production short tons	Sold or Used— Short tons	Value f. o. b. plant	Stocks end of month short tons
1958 Total	.....	1,565,556	1,595,067	.....	.....
1959					
May	131,460	163,857	182,607	89,672,327	112,710
June	112,710	167,323	191,421	93,955,552	88,612
July	88,612	179,194	187,387	91,635,864	80,419
August	80,419	172,816	159,206	77,711,678	94,029
September	94,029	168,206	153,170	74,809,052	109,065
October	109,065	173,742	151,683	73,293,070	131,124
November	131,124	153,665	152,024	74,247,828	132,765
December	132,765	162,996	184,123	89,712,146	111,638
Total	.....	1,953,017	1,987,465	.....	.....
1960					
January	111,638	164,023	148,129	\$73,424,794	127,352
February	127,352	156,825	167,215	83,087,192	117,142
March	117,142	170,688	172,846	88,761,065	114,984
April	114,984	168,596	144,469	73,561,622	139,111
May	139,111	175,863	166,403	85,418,807	148,571
June	148,571	171,356	149,917	76,925,639	170,010
July	170,010	177,564	143,948	73,173,364	203,626

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS
(Bureau of Census — Thousands of Pounds)

	Total	Sheet, Plate, Foil, Rod & Bar	Wire & Cable	Extruded Shapes & Tubing	Powder & Paste
1955 Total	2,805,500	1,542,868	365,391	812,311	35,854
1956 Total	2,870,101	1,577,601	398,602	782,398	28,017
1957 Total	2,677,423	1,396,502	399,040	789,430	28,187
1958 Total	2,624,911	1,441,385	285,355	821,249	25,742
1959					
April	293,554	166,942	25,468	93,475	3,178
May	320,786	184,664	28,532	99,308	3,641
June	341,389	195,476	30,156	107,038	3,901
July	373,060	211,850	39,902	111,661	4,708
August	247,833	126,512	29,411	85,380	2,537
September	262,749	140,313	25,843	89,986	2,419
October	287,081	154,669	27,614	97,478	2,697
November	247,260	136,516	20,528	83,594	2,304
December	268,155	152,007	24,210	84,504	2,606
Total	3,397,705	1,894,159	321,824	1,075,373	34,843
1960					
January	250,116	141,060	22,475	78,674	3,370
February	256,017	147,026	22,626	79,268	2,435
March	267,149	152,580	24,682	82,584	2,180
April	247,382	139,762	24,026	76,838	2,227
May	268,228	156,542	25,218	84,202	2,266
June	274,173	157,006	29,114	84,664	3,389
July	247,590	149,221	24,813	70,786	2,770

Aluminum Castings Shipments

(Bureau of Census)
BY TYPE OF CASTING
(Thousands of Pounds)

	Total	Sand	Mold	Die	All Other
1954 Total	609,066	155,738	213,968	232,726	6,800
1955 Total	833,058	171,757	298,115	354,804	8,282
1956 Total	801,036	171,763	245,421	376,108	7,736
1957 Total	751,656	144,121	232,326	369,086	.....
1958 Total	596,790	117,421	186,949	292,599	.....
1959					
March	73,351	12,412	26,964	33,949	.....
April	72,976	12,700	26,153	33,992	.....
May	68,268	11,979	25,283	30,877	.....
June	66,471	12,306	24,927	29,092	.....
July	56,911	11,581	20,410	24,786	.....
August	55,904	11,130	17,824	26,818	.....
September	66,193	12,309	21,506	32,239	.....
October	67,499	12,958	21,781	32,640	.....
November	54,557	10,813	16,326	27,303	.....
December	64,939	12,409	19,902	32,523	.....
Total	772,212	142,131	262,179	346,589	.....
1960					
January	68,247	11,278	22,368	34,514	.....
February	71,699	11,800	23,614	36,177	.....
March	72,216	12,934	22,413	36,749	.....
April	61,797	12,339	19,950	29,400	.....
May	60,068	11,280	20,953	27,722	.....
June	45,669	8,735	15,804	20,978	.....

METALS, OCTOBER, 1960

Virgin Aluminum*

Unalloyed Ingot (50-lb.),
99 1/2 % min., f.o.b.
Monthly Average Prices
(Cents Per Pound)

	1957	1958	1959	1960
Jan.	27.10	28.10	26.80	28.10
Feb.	27.10	28.10	26.80	28.10
Mar.	27.10	28.10	26.80	28.10
Apr.	27.10	26.10	26.80	28.10
May	27.10	26.10	26.80	28.10
June	27.10	26.10	26.80	28.10
July	27.10	26.10	26.80	28.10
Aug.	28.70	26.77	26.80	26.00
Sept.	28.10	26.80	26.80	26.00
Oct.	28.10	26.80	26.80	.....
Nov.	28.10	26.80	26.80	.....
Dec.	28.10	26.80	27.361	.....
Aver.	27.517	26.889	26.847	.....

* Price of 28.10¢ prior to Aug. 1, 1960, based on primary 30-lb. ingot, 99 1/2 % plus.

Magnesium Wrought Products Shipments

(Bureau of Census)
(Thousands of Pounds)

	1957	1958	1959	1960
Jan.	2,130	1,271	1,271	1,535
Feb.	2,522	1,280	1,691	1,724
Mar.	2,388	1,398	1,717	1,966
Apr.	2,511	1,479	2,089	1,790
May	2,230	1,443	1,644	1,989
June	1,881	1,709	1,946	1,742
July	1,428	1,227	1,681	1,526
Aug.	1,540	1,823	1,823	.....
Sept.	1,501	1,807	1,807	.....
Oct.	1,453	1,983	2,220	.....
Nov.	1,230	1,662	1,320	.....
Dec.	1,102	1,622	1,675	.....
Total	21,915	18,702	20,884	.....

Cadmium Averages

(Cents Per Pound)
N. Y. Monthly Averages
Cents per lb. in ton lots

	1957	1958	1959	1960
Jan.	170.00	155.00	145.00	148.50
Feb.	170.00	155.00	145.00	150.00
Mar.	170.00	155.00	145.00	150.00
Apr.	170.00	155.00	120.00	150.00
May	170.00	155.00	120.00	150.00
June	170.00	155.00	120.00	150.00
July	170.00	155.00	120.00	150.00
Aug.	170.00	155.00	120.00	150.00
Sept.	170.00	152.60	120.00	151.43
Oct.	170.00	145.00	*140.00	.....
Nov.	170.00	145.00	140.00	.....
Dec.	166.40	145.00	140.00	.....
Aver.	169.70	152.30	132.00	.....

* As of Oct. 1, 1959, for lots of up to one ton.

Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production — OPEN HEARTH		BESSEMER		All Companies — ELECTRIC		TOTAL		Calculated w. k. y. production, all companies (net tons)
	Net tons	% of capacity	Net tons	% of capacity	Net tons	% of capacity	Net tons	% of capacity	
1954 Total	102,840,585	73.6	2,548,104	53.2	5,436,904	52.9	5,511,632	71.0	1,653,741
1955 Total	102,840,585	91.4	3,227,997	67.4	9,147,561	81.2	115,216,149	89.8	2,201,838
1956 Total	101,657,776	87.0	2,475,138	54.9	8,582,082	71.3	112,714,936	84.5	2,161,776
1957 Total	75,888,392	62.0	1,396,348	34.7	7,972,623	55.4	85,257,363	69.6	1,635,162
1958									
1959									
April	9,884,332	95.0	196,000	66.2	964,850	87.0	11,281,920	93.0	2,629,818
May	10,117,968	94.2	200,887	66.1	1,024,401	89.4	11,600,581	92.5	2,618,441
June	9,521,053	91.6	185,794	63.2	941,056	84.8	10,907,634	89.9	2,542,572
July	4,540,182	42.2	66,433	21.9	526,025	45.9	5,227,129	41.7	1,182,608
August	1,171,342	10.9	...	...	267,935	23.4	1,439,277	11.5	324,893
September	1,219,348	12.0	...	...	2,561,919	25.8	1,535,017	12.7	358,649
October	1,385,490	12.9	...	...	319,043	27.8	1,704,533	13.6	384,770
November	6,290,659	60.5	92,361	31.4	754,793	68.0	7,266,607	59.2	1,694,081
December	10,468,534	92.4	205,666	67.7	1,033,668	90.2	11,989,319	95.6	2,712,516
Total	81,688,997	64.6	1,380,283	38.6	8,532,514	63.2	93,446,132	63.3	1,792,216
1960									
January	10,150,616	97.7	211,132	73.2	1,046,675	85.6	12,049,404	95.5	2,719,956
February	9,713,527	94.0	216,263	80.2	949,888	83.0	11,126,806	94.3	2,687,634
March	10,103,122	93.9	202,812	70.3	952,008	77.9	11,564,683	91.6	2,610,538
April	8,603,306	82.7	105,336	37.7	766,452	64.8	9,777,857	80.1	2,279,221
May	7,844,140	72.9	73,010	25.3	603,817	49.4	8,830,472	70.0	1,993,335
June	6,439,000	61.9	80,000	28.7	560,000	47.3	7,394,000	60.6	1,724,000
July	5,494,331	51.1	61,700	21.4	505,890	41.4	6,350,924	50.3	1,436,861
August	5,860,394	54.5	52,652	18.3	645,404	52.8	6,838,000	54.2	1,543,567
September	5,526,900	53.1	42,000	15.0	584,000	49.4	6,439,000	52.7	1,504,000

Steel Ingot Operations

(Percentage of Capacity as Reported by American Iron & Steel Institute)

Week

Beginning 1957 1958 1959 1960

Jan. 4...	98.4	56.1	76.2	95.3
Jan. 11...	96.4	57.0	73.6	95.7
Jan. 18...	96.6	55.5	74.6	95.4
Jan. 25...	97.6	54.0	72.6	94.2
Feb. 1...	97.1	54.0	76.9	94.3
Feb. 8...	97.7	53.5	83.8	95.7
Feb. 15...	97.8	50.9	83.7	93.8
Feb. 22...	96.0	54.6	88.5	94.4
Feb. 29...	97.1	53.1	90.3	92.8
Mar. 7...	93.8	52.4	92.0	93.1
Mar. 14...	93.5	52.5	92.9	91.5
Mar. 21...	92.4	50.6	92.9	91.1
Mar. 28...	90.6	48.6	93.2	88.7
Apr. 4...	90.3	48.5	93.3	84.8
Apr. 11...	90.4	46.8	93.8	78.1
Apr. 18...	88.7	47.9	93.5	78.5
Apr. 25...	87.0	47.8	94.2	77.6
May 2...	86.7	49.4	92.0	75.0
May 9...	84.2	52.3	92.9	73.8
May 16...	86.4	56.4	93.4	71.3
May 23...	88.0	58.1	93.6	65.6
May 30...	87.5	62.5	93.7	60.6
June 6...	86.5	84.0	92.0	61.6
June 13...	85.2	64.9	92.5	62.3
June 20...	84.0	61.7	87.3	61.0
June 27...	78.5	51.0	78.2	53.0
July 4...	78.7	53.4	79.5	42.2
July 11...	79.3	54.9	38.7	51.8
July 18...	79.4	57.3	12.9	54.4
July 25...	79.4	57.8	12.2	53.3
Aug. 1...	79.8	58.8	11.2	53.9
Aug. 8...	80.6	60.5	11.8	53.5
Aug. 15...	82.1	62.6	11.3	54.7
Aug. 22...	82.2	63.5	11.7	54.3
Aug. 29...	81.0	61.7	11.5	52.0
Sept. 5...	81.9	65.9	11.6	49.2
Sept. 12...	82.1	65.6	12.6	53.0
Sept. 19...	82.2	67.3	12.8	54.3
Sept. 26...	82.6	70.4	12.8	54.7
Oct. 3...	82.8	71.6	12.8	53.4
Oct. 10...	80.9	74.2	13.0	55.4
Oct. 17...	80.2	74.8	13.1	...
Oct. 24...	79.7	75.0	13.1	...
Oct. 31...	78.0	74.5	13.0	...
Nov. 7...	77.7	74.5	45.6	...
Nov. 14...	76.0	74.1	78.9	...
Nov. 21...	72.1	73.7	89.7	...
Nov. 28...	71.5	73.5	93.6	...
Dec. 5...	69.2	73.5	96.5	...
Dec. 12...	67.7	74.5	96.3	...
Dec. 19...	53.7	74.5	94.9	...
Dec. 26...	9.0	73.6	96.3	...

Blast Furnace Output

(American Iron and Steel Institute)

Period	net tons		Total Capacity	% of capacity
	Pig Iron	Ferro-manganese & Spiegeleisen		
1951				
Yr. 70,487,380	745,381	71,232,761	98.3	
1952				
Yr. 81,528,655	629,925	62,158,591	84.2	
1953				
Total	74,987,721	855,038	75,842,759	95.5
1954				
Total	58,119,382	668,735	58,688,117	71.6
1955				
Total	77,114,078	868,758	77,800,831	92.7
1956				
Total	75,301,134	664,341	75,965,475	88.9
1957				
Total	78,557,011	782,600	79,339,611	91.4
1958				
Feb.	4,016,276	47,953	4,064,229	58.2
Mar.	4,418,778	45,175	4,463,953	57.8
April	3,787,907	39,302	3,827,209	51.2
May	4,048,328	25,468	4,073,796	52.7
June	4,396,285	26,463	4,422,748	59.1
July	4,277,515	26,668	4,304,183	55.7
Aug.	4,799,955	31,374	4,831,329	62.1
Sept.	5,041,042	31,348	5,072,390	67.8
Oct.	5,835,995	36,963	5,872,958	76.0
Nov.	5,307,888	39,275	5,347,163	79.5
Dec.	6,025,385	47,505	6,072,890	78.6
Total	57,298,644	465,456	57,764,100	63.5
1959				
Jan.	6,260,395	48,572	6,211,823	77.9
Feb.	6,017,398	45,274	6,192,672	85.3
March	7,461,760	48,291	7,510,051	93.4
April	7,338,372	54,234	7,392,606	95.0
May	7,683,753	64,257	7,748,010	96.4
June	7,231,631	58,315	7,289,946	93.7
July	3,550,159	23,391	3,573,550	44.5
Aug.	...	...	947,779	11.8
Sept.	...	...	949,103	12.2
Oct.	...	...	1,017,659	12.7
Nov.	4,199,101	20,172	4,219,273	54.2
Dec.	7,638,359	65,728	7,704,087	95.0
Total	60,322,426	452,313	60,774,738	...
1960				
Jan.	7,753,753	76,344	7,830,097	95.5
Feb.	7,342,469	71,533	7,414,002	...
March	7,713,696	79,715	7,793,411	95.1
April	6,770,229	69,864	6,840,093	86.1
May	6,030,992	63,419	6,094,411	78.0
June	5,261,171	48,316	5,309,487	66.9
July	4,480,144	43,353	4,523,497	55.2
Aug.	4,469,505	27,603	4,497,108	54.9

Steel Castings Shipments

(Bureau of Census)

Period	(Short Tons)		For Own Use
	Total	For Sale	
1951	2,101,604	1,507,413	594,191
1952	1,925,116	1,476,352	448,767
1953	1,829,277	1,290,016	431,330
1954	1,184,096	880,158	303,938
1955	1,530,694	1,166,706	363,988
1956	1,931,987	1,512,290	416,697
1957			
Total	1,766,191	1,261,301	406,444
1958			
June	92,681	71,624	21,237
July	68,802	48,618	10,184
Aug.	80,886	59,816	21,070
Sept.	85,277	64,586	20,691
Oct.	95,389	73,367	22,022
Nov.	85,267	65,788	19,479
Dec.	103,800	81,360	22,440
Total	1,114,939	859,125	255,814
1959			
Jan.	105,392	82,693	22,709
Feb.	110,280	86,013	24,267
Mar.	131,317	103,848	27,469
Apr.	134,344	104,890	29,454
May	135,359	105,804	29,555
June	143,624	111,725	31,899
July	106,790	83,541	23,249
Aug.	98,014	79,188	18,826
Sept.	99,731	79,963	19,768
Oct.	105,570	84,850	20,720
Nov.	109,460	86,026	23,434
Dec.	103,800	81,360	22,440
Total	1,023,861	919,181	294,430
1960			
Jan.	122,565	94,052	28,513
Feb.	129,259	97,927	31,332
Mar.	143,708	109,688	34,020
Apr.	127,219	96,557	30,662
May	126,580	97,231	29,349
June	136,992	107,076	29,916
July	89,565	67,924	22,271

Galvanized Sheet Shipments

(American Iron & Steel Institute)

Period	(Net Tons)		1960
	1957	1958	
Jan.	235,902	186,649	279,244
Feb.	205,048	167,627	281,637
Mar.	296,836	195,845	311,961
Apr.	198,585	206,368	328,759
May	206,657	231,318	317,059
June	239,037	277,180	350,333
July	167,247	239,883	180,787
Aug.	186,790	253,263	N.A.
Sept.	183,952	258,723	N.A.
Oct.	212,866	290,157	N.A.
Nov.	190,380	253,909	196,644
Dec.	159,363	266,472	301,911
Total	2,392,637	2,828,848	2,772,837

N.A.—Not available.

SHIPMENTS OF TIN-TERNEPLATE

(American Iron & Steel Institute)

Period	(Net Tons)		1960
	—Hot Dipped—	—Electrolytic—	
Jan.	30,304	32,525	417,210
Feb.	24,602	29,385	442,625
Mar.	46,705	38,131	597,408
Apr.	54,906	37,106	689,998
May	64,110	37,705	689,064
June	62,965	51,810	679,819
July	36,381	47,074	24

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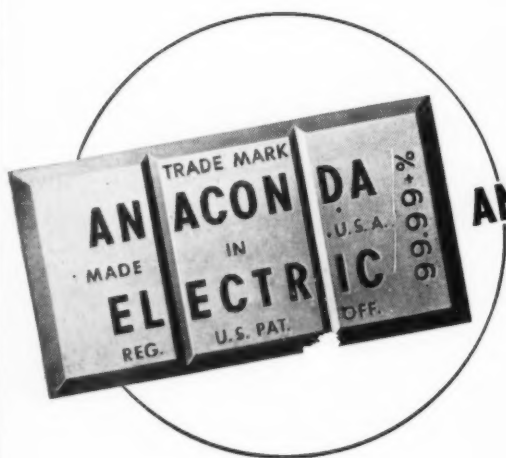
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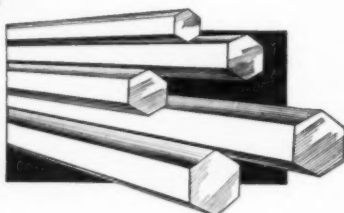
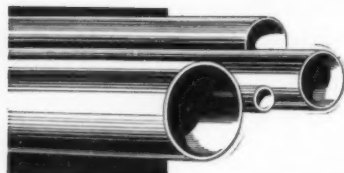
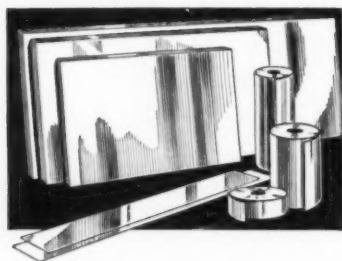
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*Warehouses

58294
(Rev.)

